THE MIX

MAC, PC, ATARI & AMIGA PAGES

Sell your music on the Internet

A revolution in music distribution? Find out inside...

Issue 56
December 98
£3.99
mag + cd

The UK's No.1 Recording Magazine

CD-R Shootout!

Every CD recorder under £1,500 reviewed and rated

1000's of new products listed in THE Buyer's Guide

16 Mac FAQs
Sony DPS V-55m
K-klass of '98
Emagic Unitor 8
Line 6 Amp Farm
News from AES
Quested UD-1
Mandala Studios

ON THE CD

- Guitars II: studio samples
- K-klass track
- Line 6 Amp Farm
- Sony DPS V-55m FX
- Steinberg Q Metric
- Arboretum Ray Gun

future PUBLISHING
Your Guarantee Of Value

9 771354 428024 13

inspired
TASCAM

DIGITAL FOR THE PEOPLE

At last the promise of digital mixing is fulfilled with TASCAM's extremely powerful, compact TM-D1000 – the lowest cost digital mixer ever, at just £899 inc vat.

- 8 ch integral TASCAM (TDIF) digital I/O
- 8 ch Alesis digital I/O (with optional interface unit)
- 8 mic / line analogue ins; inc. 4 balanced XLR
- optional rack mount kit
- AES / EBU and SPDIF stereo digital I/O
- stereo analogue and separate monitor outs
- 4 configurable aux / group outs
- assignable on-board digital effects
- optional additional FX board doubles effects DSP
- 128 snapshot memories
- MIDI sequencer automation of console
- MIDI I/O, MMC and MTC slave and Word sync. I/O

TASCAM

TM-D1000

TASCAM 5 Marlin House, The Croxley Centre, Watford, Herts, WD1 8YA. **Brochure Hotline 01923 819630**

YOU SPIN ME RIGHT ROUND, BABY

The *Times* phoned me up the other day and asked me about the impact affordable CD-R would have on the record industry, and the danger of piracy on a national scale. I said, "Listen mate, I don't know about the consumer market, but for my readers – who are producers, engineers and musicians – CD-R is the absolute bollocks!"

Let's face it, most of us with a CD-R are too busy making CDs of our own stuff to bother running off copies of the *Bee Gees' Greatest Hits*. What greater satisfaction can there be than to have your finished work on that little silver disc? How much better is it to have your hard work archived on CD than DAT, 1/4" tape or cassette? Miles better, that's what. It's convenient, it sounds good, it looks good, and it actually feels like a finished product.

One sign of the popularity of CD-R in muso circles is the number of readers' demos we get sent on CD. A couple of years ago, the humble analogue cassette was still the most common means of currency (back when you could call a demo a 'demo tape'), despite encouragement by

the likes of ourselves to use DAT. And anyone who sent in a CD or vinyl we put down to the senders being, quite frankly, flash bastards. In late '98, however, CD-R is the norm for submitted demos. Not surprisingly, really, since if you're serious about your music, you want to present it in the best possible light, to give it the best chance of success. And CD is the best medium.

Or is it? Just as we can finally all afford to get ourselves a CD-R machine, and the price of blanks makes it possible to do short runs ourselves, the very future of the format is under question. MiniDisc has been promoted so aggressively that it's finally making an impact in consumer and professional circles alike. And who says that for certain applications (like in-car hi-fi) it's such a bad thing? And then there's DVD, which all the electronics giants and record companies hope will sweep away CD in an orgy of re-released back-catalogues, mass hardware upgrades, and general money-making not seen since the introduction of CD. Is it the end of CD and our brief wallowing in the pleasure of pressing our own discs?

Maybe. Maybe not. But who cares? There's still a lot of wrangling to go through on standards, formats, specs and global politics before the Fat Lady sings for CD. In the meantime, just enjoy the fact that you can present your music on exactly the same format that the biggest bands and producers in the world do.

Chris Kempster

Chris Kempster, Editor

ALSO AVAILABLE FROM US

FUTURE MUSIC
Making music with modern technology

PLUS... Guitarist, Total Guitar, Rhythm, Guitar Techniques, Bassist, Hip Hop Connection

About... THE Mix

The Mix is the essential accessory for the recording studio. Our equipment reviews, written by working producers and engineers, give you an impartial opinion of the latest studio and recording gear, and our interviews get to the heart of the current techniques and issues in the recording industry.

The Mix CD helps you produce better music, by providing studio-quality samples and MIDI files, demos of the latest software and hardware, and audio tutorials demonstrating contemporary recording techniques.

CONTRIBUTORS TO THIS ISSUE

PHIL STRONGMAN has been reviewing music and visiting studios for us since 1994, but he's also run clubs, mixed tunes and done radio broadcasts, as well as writing for *i-D*, *Time Out*, and *Hi-Fi Choice*. He's one of the few men alive who remembers when Bob 'digi-king' Dormon was a humble young tape-op. Phil's novel about music biz corruption, *Cocaine*, is reissued by Abacus in January, and he'd like us all to buy several copies.

PAUL IRESON The former editor of another hi-tech recording magazine, Paul has now graduated to writing for the best one! He's been writing about music and recording technology for almost 10 years, and also writes on popular science, gadgets, and design. With all that, he still finds time to produce commercial CD-ROMs and websites, and indulged in a spot of internet shopping this month to research the first part of our net music feature (p. 78).

ALAN BRANCH has gone from working-class music college student to one of London's most in-demand engineers/remixers, and his star just keeps on rising. And although his credit list includes M-People, Jamiroquai, Blur, Eternal, and Primal Scream, he's never let success go to his head. This month Alan takes Hooter's B1 processor and Audio Technica's 4060 mic into the studio with him – you can read all about it on pages 39 and 61.

THE MIX Future Publishing, 30 Monmouth St, Bath BA1 2BW Tel: 01225 442244 Fax: 01225 732353 Email: themix@futurenet.co.uk Website: www.musiciansnet.co.uk
EDITORIAL: Editor Chris Kempster **Art Editor** Hanif Saddiq **Designer** Claire Watkins **Production Editor** Andrea Robinson **Technical Editor** Paul Mac **Features Editor** Nick Serre **CD Editor** Adam Crute **On-line Editor** Anthony Grimley **Contributors** Bob Dormon, Ian Waugh, Phil Strongman, Alan Branch, Tim Barr, Trevor Curwen, Danny McAleer, Tim Oliver, Danny McAleer, John Kennedy, Matt Overton, Jon Musgrave **Senior Art Editor** Ian Miller **PHOTOGRAPHY Studio** Gavin Roberts **Location** James Cumpsty **ADVERTISING: Group Ad Manager** Duncan Ferguson **Senior Ad Manager** Gary Povey **Deputy Ad Manager** Mark Durham **Senior Sales Executive** Simon Tapscott **PRODUCTION: Production Manager** Glenda Skidmore **Deputy Production Manager** Carolyn Tandy **Production Co-ordinator** Jeremy Ford **Music Copyright Co-ordinator** Gabrielle Stackpool **Ad Design** Emma Cary **Circulation Director** Sue Hartley **Group Publisher** Simon Halsman **Assistant Publisher** Simon Wear **Publishing Director** Jane Ingham **Managing Director** Greg Ingham **Printed by** Heron Print, Heybridge, Maldon, Essex **Licensing enquiries:** Chris Power Tel: 01225 442244 **UK and world news-stand distribution:** Future Publishing Ltd, 01225 442244 **PR and publicity** Liz Ramsey, Jenny Press Tel 0171 331 3920
Subscriptions/backissues: 01458 271 122, Future Publishing, FREEPOST (BS4900), Somerton, Somerset TA11 6BR

© Future Publishing 1998. No part of this magazine may be reproduced, stored in a retrieval system or resold without the prior written consent of the publisher. Unless otherwise specified, prices quoted on the editorial pages are recommended retail prices and include VAT. The Mix makes every effort to check all information, but can accept no responsibility for any errors or omissions. The Mix recommends that all your purchases from our advertisers are made with a credit card, so in the unlikely event of a problem, redress may be sought from the credit card company. The Mix recognises all copyrights contained in this issue. Where possible we acknowledge the copyright holder. All contributions are submitted and accepted on the basis of a non-exclusive worldwide license to publish or to license others to do so unless otherwise agreed in advance in writing.

TOP GEAR

Recordable CD might be the perfect project studio mastering medium, but what machine should you buy? This month's *Top Gear* is a stack of contenders for the CD-R crown

From the top:
HHB CDR-800 (£1,149)
Fostex CR200 (£1,522)
Philips CDR880 (£360)
Marantz CDR880 (£749)
CD recorders
Reviews start on page 27

REC BALANCE
REC LEVEL
RECORD
REC MUTE
PHONES LEVEL
PHONES
PROFESSIONAL
DISPLAY
INPUT
AUTO/MANUAL
OPEN/CLOSE
REC LEVEL
STOP
PAUSE
PLAY
FINALIZE
ERASE
CD SYNC
PREV
NEXT
PROFESSIONAL
STOP
PAUSE
PLAY
REC LEVEL
OPEN/CLOSE
REC
FINALIZE
ERASE
CD SYNC
TRACK

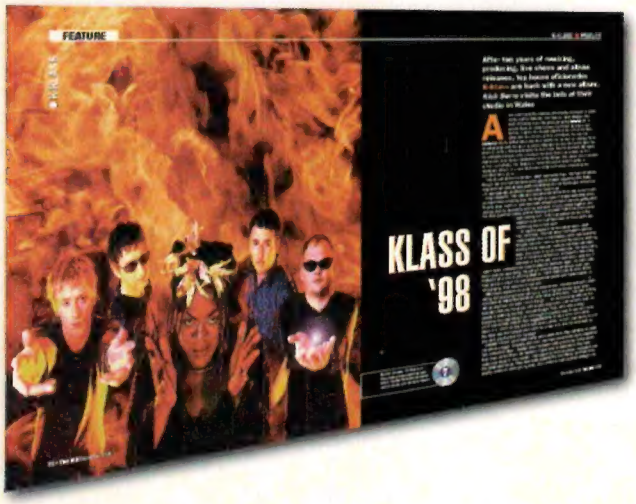
ISSUE 56 DECEMBER 1998

CONTENTS

FEATURES

72 **K-KLASS**
10 years old, K-Klass have just completed their second album, *K2*, in a nuclear bunker! *Nick Serre* gets caught in the fall-out

78 **MUSIC ON THE INTERNET: PART ONE**
Are record shops a thing of the past? *Paul Ireson* looks at how the major players are switching to internet music distribution



84 **STUDIO FILE**
The man behind the Sex Pistols and Lena Zavaroni has a place of his own. *Phil Strongman* visits Dave Goodman's Mandala studios

170 **Q & A**
In the hot seat is DJ and dance king David Holmes. He talks to *Nick Serre* about inspiration, production, and destiny

REGULARS

10 **NEWS**
If it's music production, it's here. All the gear announcements, gossip and goings-on from [illegible] in the biz

22 **OPEN MIC**
Industry squabbles, retail rants... Here's a chance to have your say, and maybe win a fabby Shure jacket

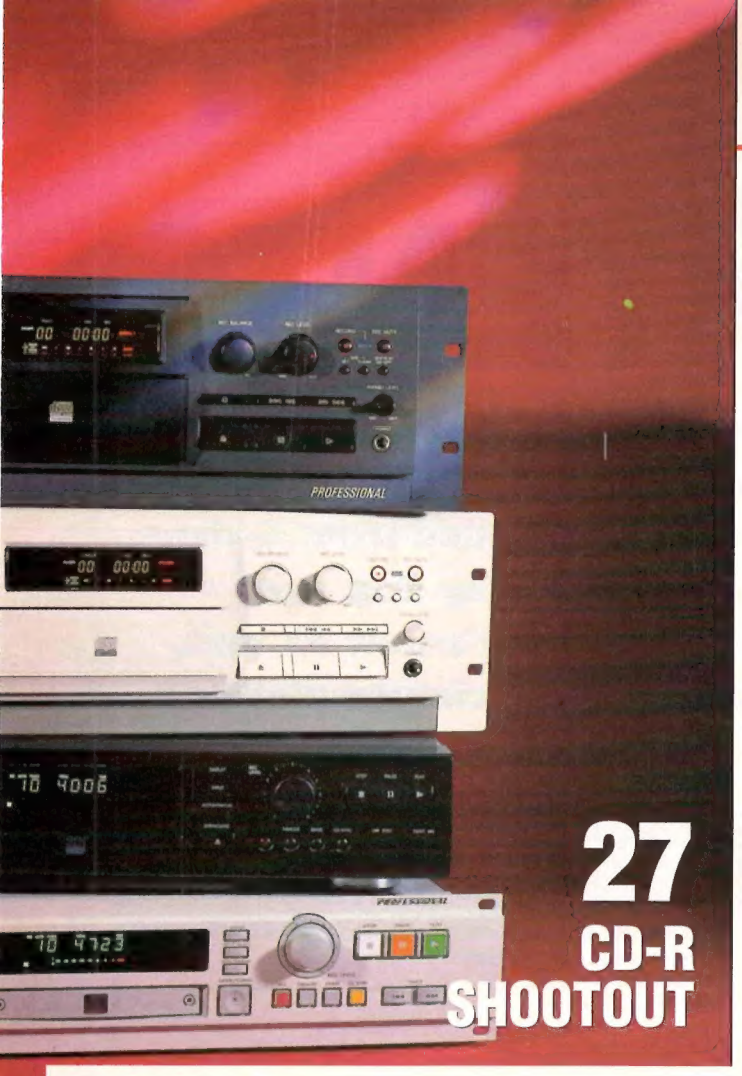
70 **ALBUMS**
Read all about the best new releases this month, plus who's in the studio with whom, and why!

91 **TOOLBOX**
News, tips, and new software for the computer of your choice – PC, Mac, Atari, and Amiga

112 **A&R DEPT.**
Send us your demos if you think you're hard enough, and you could walk away with free recording media from HHB

115 **BUYERS' GUIDE**
Our comprehensive directory of every piece of studio kit on the market – 36 pages of it!

157 **READERS' ADS**
Looking for a second-hand bargain? Look here first, 'cos it's the best free ads section anywhere



REVIEWS

27 **CD-R GROUP TEST**
We review every CD-R under £1,500, including models from Fostex, Marantz, HHB and Philips

39 **HOOTER B1**
A low cost pre-amp/compressor/limiter from the Joe Meek school of design. *Alan Branch* fires it up

42 **LINE 6 AMP FARM**
Not just another TDM plug-in, Amp Farm is guitar amp simulation at its most sophisticated. *Paul Mac* gets strung up

46 **SONY DPS-V55M**
Multi-effects with a pleasant surprise in the money department. *Trevor Curwen*'s on the job

50 **EMAGIC UNITOR 8**
The ins and outs of MIDI leave most computers one socket short of a system. *Bob Dormon* has an answer

54 **STEINBERG Q-METRIC**
This EQ plug-in might be expensive, but VST users hungry for top performance will find comfort in the words of *Ian Waugh*

56 **TC ELECTRONIC GOLD CHANNEL**
The ultimate direct-to-digital solution? That's what TC say – but what does *Bob Dormon* think?

61 **AUDIO TECHNICA AT4060**
Audio Technica have pushed the boat out with their first large-diaphram valve condenser mic. *Alan Branch* speaks out

64 **ARBORETUM RAY GUN**
Ray Gun disintegrates noise wherever it hides, as long as it hasn't got a reflect-o-matic for protection. *Ian Waugh* reports

66 **QUESTED UD1 MONITORS**
Posh looks, posh sounds, posh price. *Trevor Curwen* takes this listening room royalty to his heart

SOUND ADVICE

100 **HELP FILE**
Problems in the studio? This is where our team of experts turn audio agony aunts to find solutions to your technical hitches

104 **PETSOUNDS**
Trevor Curwen gets trigger-happy trying to match the sequenced synth sound from Blondie's 'Heart of Glass'

108 **MAC TROUBLE-SHOOTING**
16 problems and 16 solutions for anybody frustrated by their attemps to conquer their Mac. Compiled by *Ian Waugh*

CD CONTENTS

The Mix
future
STUDIO SERIES
SAMPLE CD
VOL 13: GUITARS II
Audio • WAV • AIFF
CD/13
• Rock • Funk • Blues • Heavy Metal
• Riffs • Licks • Dive-bombing • Taps
• Twiddles • FX • Ambient Weirdness
PLUS: K-klass, Sony DPS V-55m FX, Line 6 Amp Farm, Steinberg Q Metric, Arboretum Ray Gun

This month we've got a shedload of guitar samples to set your tracks on fire. Also: old-skool house from K-klass, demos of Amp Farm, Ray Gun and Q-metric plug-ins, Sony's new FX unit, and software for your chosen platform

SOFTWARE

TRACK 1

PC

BBox1-3
A selection of audio files produced by Steinberg's B.Box virtual drum machine. They're in .au format but their grooviness shines through.

Pump
A pattern-based, step-time MIDI sequencer with a user-friendly environment.

Ray Gun
Demo of Arboretum's noise reduction plug-in. Just point and shoot to remove hum, hiss, snaps, crackles, and clicks from your recordings.

Mac

Ray Gun
(see PC section)

LickMachine
A real-time composing arranger and manipulator. Record grooves, loop them, process them and generally play fast and loose with them. Or tight. Or sloppy...

Atari

Quincy
Demo version (the permanent-save function is disabled) of an 8-track hard disk recorder for the Falcon.

CK MIDI
Useful utility for testing your MIDI cables and set-up. Runs on all Ataris.

NSQ
Another version of this interesting, but quirkily-programmed sound chip synthesizer. Runs on all Ataris (in any resolution), and includes lots of great examples.

Movie II
Generic system exclusive utility, useful for saving MIDI bulk dumps to disk for later retrieval (since it loads and saves). Works on all Ataris in ST medium or high resolution.

Longplay STE/ LPS123
Two interesting programs which enable STE users to load and play samples greater than the available memory.

Examples in AVR format
A small selection of samples to complement the sound processing article in *Toolbox*.

Amiga

Pegase.lha
A fast MPEG audio encoder (layer 1 and 2) for any 68020 or better Amiga with a Floating Point Unit.

CS1xEdit.lha
One of the most useful Amiga audio programs yet, this is a real-time editor for altering the parameters of a Yamaha CS1x keyboard. Save and load performances, and tweak existing sounds with the easy-to-use graphic display.

AmigaAMP.lha
An MPEG audio file player for 68030 systems or better. One of the smartest players about.

About the *Studio Series CD*

Every month, the *Studio Series CD* brings you a selection of top-quality samples that you can collect to build your own sample library. Each CD is themed, with one instrument/ sound-type featured at a time, and using the colour coding system (right) you'll be able to locate samples quickly and easily.

MIDI files and synth sounds on the CD also follow the theme – this way you have instant production tools at your disposal. Need a drum track? Just go to the correct CD, load up the samples and corresponding MIDI files, and you're away...

- BRASS/WOODWIND
- VOCALS
- DRUMS/PERCUSSION
- ORCHESTRAL
- FX/AMBIENT
- SYNTHS/KEYS
- GUITAR/BASS

THE MIX STUDIO SERIES SAMPLE CD

REGULARS

TRACK 2-7

Commercial Track

2 K-klass 'Burnin' (12" K-klass Klub Mix)'
Classy house from the K-klass crew on the eve of their 10th anniversary.
©1998 Parlophone Records

Demo of the Month

3 Hooked 'Killing Time'
Introspective, downbeat indie pop from these mavericks of invention.

Gear Demos

4 Sony DPS V–55m
(i) Alesis D4 snare put through first 20 programs, all based on a plate reverb.
(ii) More esoteric programs, all triggered from one piano note.
(iii) Guitar demonstrating wah program and some rotary speaker programs with rotor speed changes.

5 Line 6 Amp Farm
A selection of guitar riffs demonstrating the wide variety of settings on this versatile plug-in.

6 Arboretum Ray Gun
We put this cool noise reduction plug-in through its paces. The first section contains hisses and pops typical of an old LP. In the second section, RayGun has been used to reduce the noise and clicks, producing a much cleaner recording.

7 Steinberg Q-Metric
An average, even-toned Techno toon before and after the Q-Metric treatment. The low-end has been lifted, one of the Mid Para EQs was used to hone in on and solidify the bass drum, and the piano is sharper and brighter.

Sound Advice

20 Petsounds
Trevor Curwen demonstrates how to obtain the analogue sequencer sound on Blondie's 'Heart Of Glass' – using noise gates! He then uses the technique to produce a variety of other sounds.

SAMPLES

TRACKS 8-19

8-12 *Guitarist* magazine's fretmeister-in-chief Simon Bradley goes ballistic:

8. Heavy metal riffs and FX: i–xv

9. Blues: i–xv

10. Funk: i–xii

11. Acoustic 12 string: i–iv

12. Acoustic 6 string: i–iv

13-19 Richey T. gets lowdown and funky with all manner of groovy riffs:

13. Funky riffs @ 100 bpm
i–vi Middle pickup
vii–xii Bridge and middle pickups

14. Funky riffs @ 100 bpm
i–vi Bridge pickups

15. Heavy riffs @ 90 bpm
i-iv Combination of distortion, flange and delay

16. Heavy riffs with distortion and flange
i–ii @ 90 bpm
iii–vi @ 110 bpm

17. Clean chords with flange and delay i–viii

18. Wah guitar
i–ii Riffs @ 90 bpm
iii–iv Chords
v–vi More 90 bpm riffs

19. More wah guitar
i–iv Octaves @ 105 bpm
v–viii Riffs @ 105 bpm

MIDIFILE DANCE TOOLS

When you make music, you want it to come out the way you hear it in your head. We introduced a range of midifile tool disks which give you the freedom to choose, use or abuse the various patterns they contain. Make fresher, more creative, original, professional tracks. You can analyse the complex dance grooves of the Newtronic loop & tool disks and you have all the space you need to make them part of your sound. Each disk is style specific - you get what you ask for. If you are into dance music you can't afford not to talk to us.

creative tools for music programmers
Pro Studio Loops: all Dance Styles in stock!
Pro Studio Tools: Midi Gates • Arpeggio Kit • Filter Kit!
Creative Groove Tools: Dance/Deep House • Drum'n'Bass
Pro Studio Elements: Club/Rave Bass • Dance Chords
MIDI Busker Series: Acoustic & E-Guitar Series
Production Libraries: Club • Hip Hop • Jungle Nation -Series

newtronic DIRECT

visit our on-line service for music programmers:
• detailed product info
• free downloads
• clinics
• on-line shop

www.newtronic.com
email: sales@newtronic.com

SAMPLING MATERIALS

New from Japan !
Tokyo Dance!
99loopX
Vol.1 System700 + Loops
Vol.2 Voix + Noiseloop
Vol.3 Scratch & Loops
Vol.4 PPG & Loops
Vol.5 Chu-Lip & Drumtracks
Vol.6 3D Sound + Loops
each £19.95
Complete Library £99.00

"This is by far the most comprehensive breakbeat pool I have seen for drum & bass to date."
The Mix.

drum'n'bass vol.1 (wav/audio) £29.95
drum'n'bass vol.2 (wav/audio) £29.95

also available
Analog Control S3000 £29.95
Sounds of Old audio £29.95
Legend of Proxenus EIV £98.00
Get our CD info!

Newtronic Ltd.
62B Manor Avenue • London SE4 1TE
Tel: +44 (0)181 691 1087
Fax: +44 (0)181 691 2284
INTERNATIONAL MAIL ORDER SERVICE
P&P from £3.00 UK, from £4.00 EU, from £5.00 World, UK next day £6.00

newtronic

Newtronic authorised stockists:
turnkey - london
sound solutions - southwater
rose morris - london
ask your local dealer !

AES REPORT...

THE BEATS OF SAN FRANCISCO

Whether you're an analogue apostle or a digital diehard, the Audio Engineering Society Convention caters for all tastes. *Bob Dormon* reports from the 105th convention in San Francisco...

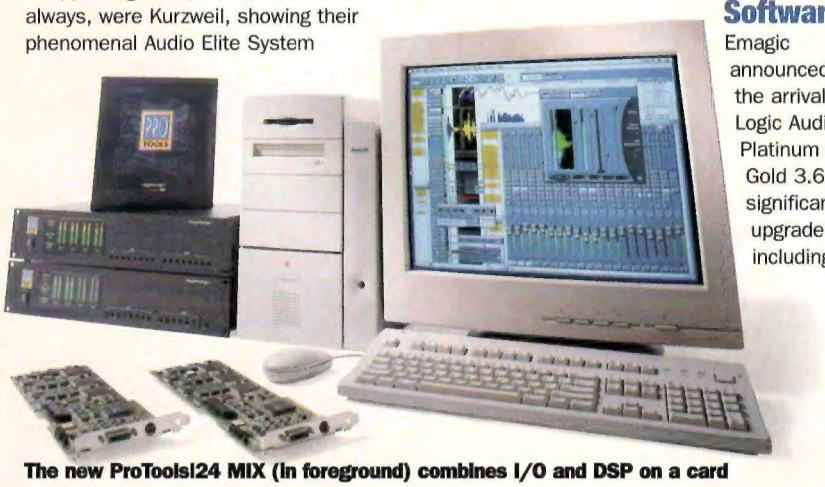
In case you hadn't guessed, the audio industry is a big mutha of a business, and the AES captures the professional side of the recording world. While our own National Music Show will provide a splendid cross-section of what's on offer, the AES brings the big boys into town so the great unwashed and a fair share of folk in suits can deliberate or salivate over the latest merchandise. So what's new?

MIDI synths & controllers

Apart from the multitude of MIDI software applications, MIDI hardware only really had a token presence at the AES in the face of the sprawling recording hardware on show. Roland were busy demonstrating the JP-8080 analogue modelling synthesizer, SP-808 Groove sampler and V-Drums. Meanwhile, EMU were boasting 128-note polyphony from their new Proteus 2000 module complete with 32Mb of ROM sounds with slots to allow 128Mb.

Appealing to expensive tastes, as always, were Kurzweil, showing their phenomenal Audio Elite System retailing at $20,000! Included is the exquisite K2500XS keyboard, KDFX (8-channel DSP), all three of their ROM expansion boards, 128Mb of sample RAM, 2Gb internal drive, with two DMTi digital multitrack interfaces (for 16-track digital audio) external D-ROM drive and 40 native Kurzweil CD-ROMs. Those with smaller pockets might well be content with the Kurzweil Expressionmate, a MIDI controller featuring a 60cm ribbon controller, which can be handheld if desired and have up to three different zones. It also includes three syncable arpeggiators and breath controller input, plus two footswitch control inputs.

In a similar vein, Peavey's PC 1600X MIDI command station could be found under the shadow of their towering sound reinforcement equipment. This customisable device designed for remote control of all manner of MIDI hardware has 16 faders and buttons plus CV/footswitch inputs with the ability to operate anything that uses MMC.



The new ProTools|24 MIX (in foreground) combines I/O and DSP on a card

Software

Emagic announced the arrival of Logic Audio Platinum and Gold 3.6, a significant upgrade including support of Steinberg's ASIO driver system. Now numerous audio cards can now work with Emagic software. Support for Yamaha's DSP Factory, Digidesign's Project II and ProTools 24 Mix cards together with MOTU's 2408 is also included in this free update for existing 3.5 users.

Talking of Yamaha's DSP Factory, the long awaited Mac drivers are due imminently. The Lexicon Studio was on show running on a Mac (at last) with Cubase VST. The Mac ASIO drivers (which mean the Lexicon Studio will run on Emagic, Steinberg and Opcode software) will be available at the end of October.

In fact, Steinberg's ASIO and VST architectures have become a uniting force among the software vendors, when a year ago the picture looked quite different. Among other things, Steinberg were pleased to announce Cubase VST/24 3.6 for Windows, their high-end 24-bit version, which has been available for the Mac as version 4.0 since the summer.

Opcode were showing their Vision DSP software, plus the extremely versatile high-end version Studio Vision Pro 4.1, both with ASIO and VST support for the first time. This together with the SVPro's unbeatable MIDI-to-audio and audio-to-MIDI functions should boost Opcode's acceptance in Europe, where Steinberg and Emagic remain the dominant forces.

Cakewalk, the dominant force in the PC audio and MIDI world, were demonstrating Pro Audio 8, the first audio/MIDI application for Windows 95/98/NT to be capable of 24-bit, 96kHz recording. Plug-ins weren't to be left out either, as at the other end of this paradoxical audio spectrum, Cakewalk revealed two Audio FX2, 32-bit real-time effects. The analogue tape simulator provides a user-controlled

mix of both good and bad tape artifacts while the FX2 Amplifier/Speaker simulator does much the same but for valve or solid state amp aficionados.

Digital audio hardware

As sure as night follows day, software needs hardware. Digidesign, vendors of both, were keen to demonstrate the advantages of their new Pro Tools|24 MIX, 16-channel system. This effectively dispenses with the hefty hardware that used to accompany Pro Tools TDM systems. You still need an 888 or 882 interface, but the Pro Tools|24 MIX system is based around a single card that can deliver 64 audio tracks, three times more DSP power than previous systems and 24-bit audio with an 888|24 audio interface. Accordingly, new Pro Tools|24 MIX TDM plug-ins have been developed to take advantage of the increased potential offered by the system.

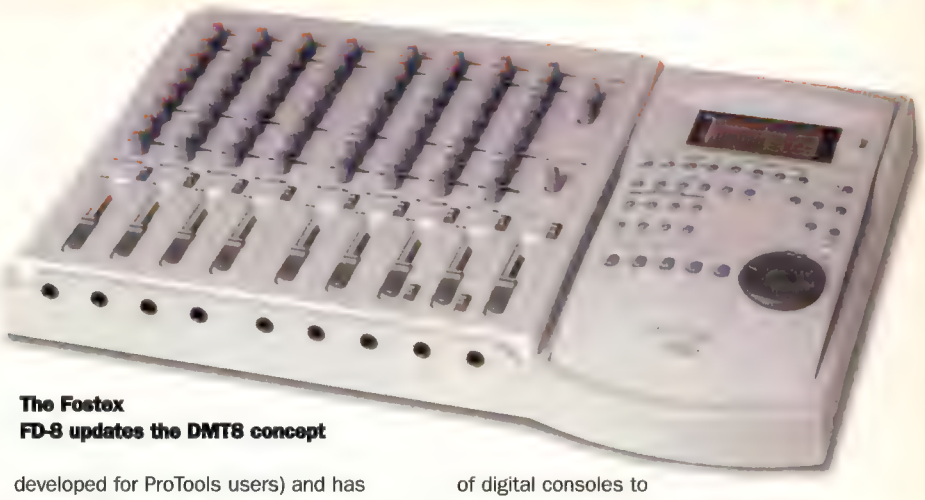
HHB's new Circle 5 monitors

Roland, who've been in this game a while, have added yet another enhanced version of their VS-880. The VS-880EX allows simultaneous 8-track recording and features more inputs and outputs. The virtual track count has been doubled to 128, the converters are now 20-bit, and the effects are built-in.

Apogee Electronics revealed the affordable 2-channel Rosetta AD 24-bit A/D converter featuring two AES/EBU and S/PDIF outputs, plus ADAT and TDIF outs. Along similar lines but operating at 96kHz with a D/A output too, the Apogee PSX-100 provides comprehensive sync capabilities too for the high-end user.

The bonding of Emu and Ensoniq has produced some interesting results. The Mantis is a 112-input digital mixer that includes technology originally developed for Emu synths and samplers. This 24-bit system has its own control surface but supports the tactile Mackie HUI (originally developed for ProTools users) and has Mac and PC user interface software too. The Ensoniq Paris hard disk recording workstation has evolved into the 24-bit Paris Concept and the Paris Concept-FX. The latter includes real time dynamics and time delay effects. Both systems are cross-platform providing support for VST or Direct-X plug-ins.

The Sonorus AD9624 and DA9624 8-channel 96kHz, 24-bit converters feature AES/EBU interfacing plus an optional card bay for ADAT, TDIF, ProTools and Sonic USP. Their AES8 converts AES/EBU, ADAT and TDIF sources and provides sample rate conversion too.



The Fostex FD-8 updates the DMT8 concept

Consoles

It's fair to say that digital audio dominated the AES show with the likes of Spirit (by Soundcraft) proudly showing off their compact 328 digital console, which began shipping in the same week.

Tascam have expanded their TM-D class of digital consoles to include the TM-D4000, a mid range version that has 32 mono and two stereo channels, dynamics processors, three interface slots for 8-channel TDIF, AES/EBU or analogue interfacing. The console also features motorized faders. Tascam have also brought out a couple of analogue to TDIF multichannel converters to expand the analogue inputs on their consoles. They've also produced a compact TDIF/ADAT conversion box plus a range of CD-Rs including rewriteable models and a twin drive duplicator for audio CDs and CD-ROMs.

Mackie's digital 8-buss was neatly flanked by Aspirin packets with their logo on them. Their long-awaited 56-input, 72-channel console is available in the US, but held up in Europe by CE compliance. It features Apogee's UV-22 requantizing algorithm that enables its 24-bit output to be used without noticeable loss on 16-bit masters.

MO gains ground

Available from Yamaha in 1999 is the D24. On show but still under development, this 24-bit, 8-track recorder uses 3.5" 640Mb MO disks and can have up to eight D24s linked up. 96kHz recording is possible too, but the track count is halved. Featuring a jog/shuttle wheel, this machine follows conventional recording procedures and doesn't use any of the bounce-down trickery found on their MiniDisc recorders. Interfacing is down to the user as it takes the same cards as their 01v console. Sony have their own MO-based recorder too, the DADR-5000. Intended for film use, the unit has comprehensive synchronisation features and can be operated at resolutions of 16, 20, or 24-bit.

Sleek new D24 from Yamaha

If you're the sort that likes to make music on the move then the ETEK NoteMix is a neat design that will appeal instantly. This 14-channel 100 or 200 watt powered mixer bears all the signs of a notebook computer, but open it up and where the screen should be is the control surface. Sliders replace knobs keeping the unit compact sporting a 3-band EQ, three aux sends, three built-in digital effects, PFL, four stereo inputs and phantom power on the six mic inputs. The NoteMix comes with a shoulder bag and has a 24-channel expansion port. It's distributed in the US by Wave Distribution (www.wavesdistribution.com).

Mics and speakers

Alesis were showing off their acquisition of Groove Tube microphones. The GT range has been supplemented by four new large-diaphragm mics: the AM51, AM52, AM61, and AM62. The latter two employ hand-selected dual triode valves, with the AM62 offering four polar patterns and the AM61 having a fixed cardioid pattern. An Alesis spokesman said that together with the GT mics and their new M1 active biamped reference monitors they had "now covered the beginning and the end of the signal chain."

AKG's popular C3000 has had a makeover, and been dubbed the C3000 Sterling due to its attractive scratch-resistant silver finish. Claiming more patent awards than all its competitors put together, AKG were showing that the little things count with their H 100 'spider' shockmount suspension arrangement. Meanwhile, Neumann were going for gold celebrating their 70th anniversary with a limited edition 24-carat gold U87. They also announced the M 149 Tube, a valve mic featuring a variable dual-diaphragm that enables a selection of nine (!) polar patterns.

Britain's HHB revealed their Circle 5 compact studio monitors. Available in passive or active configurations, the Circle 5s feature coloured cones in the famed HHB purple.

Serious fun

With surround and 3-D mixing variations appearing everywhere, sometimes setting up multispeaker systems just isn't practical, which is where Sound Retrieval Systems(SRS) come in. Pioneering 3-D sound from just two speakers, the SRS demos had to be heard to be believed. TruSurround is ideally suited for Dolby's AC-3 system and allows users to check the integrity of material destined for media such as DVD with just two speakers.

TruBass enhances the bass presence and 'creates' bass from speaker sources not designed for a low bass response. Putting the speakers on the floor, SRS applications specialist Ron Knapp demonstrated F(O)CUS, a system designed for car stereos which actually lifts the sound off the floor, providing superior definition. SRS licenses its technology to dozens of companies, including Apple Computers, Motorola, and Sharp.

Show's over, folks

With over 380 companies exhibiting at the AES show, it's impossible for us to cover all the products here. But if this report has whetted your appetite for a hi-tech blow-out, then remember the AES does one show in the US and another in Europe every year. Check out their website [**www.aes.org**] for more information on forthcoming events.

Making Waves

Capitalising on their software plug-in success, Waves, who have long since wowed the mastering world with their simple but effective L2 Ultramaximizer, demonstrated a 2U rackmount version. The main features are 48-bit internal processing and the IDR (Increased Digital Resolution) algorithm that requantizes 24, 22, 20 and 18-bit resolutions down to 16-bit for CD mastering. Returning to their software roots, Waves also announced the Renaissance EQ and plug-in support for ProTools|24 MIX system with both their TDM and Gold bundles.

It's Waves, Captain, but not as we know it

HHB

CDR800
Compact Disc Recorder

ANDERTONS MUSIC CO
Guildford Tel: 01483 456777

DAWSONS
Warrington Tel: 01925 632591

EDDIE MOORS MUSIC
Bournemouth Tel: 01202 395135

THE GUITAR & AMP CENTRE
Brighton Tel: 01273 676835

KGM
Wakefield Tel: 01924 371766

THE M CORPORATION
Nottingham Tel: 0115 9474070

THE M CORPORATION
Ringwood, Hampshire Tel: 01425 470007

MUSIC CONNECTIONS
Birmingham Tel: 0121 212 4777

MUSIC CONNECTIONS
Bristol Tel: 0117 946 7700

MUSIC CONNECTIONS
Chelmsford Tel: 01245 354777

MUSIC CONNECTIONS
Leeds Tel: 01943 850533

MUSIC CONNECTIONS
London SW6 Tel: 0171 731 5993

MUSIC CONNECTIONS
Southampton Tel: 01703 233444

MUSICAL EXCHANGES
Birmingham Tel: 0121 248 5868

MUSICAL EXCHANGES
Coventry Tel: 01203 635766

Q MUSIC
Birmingham Tel: 0121 643 4655

SOUND CONTROL
Dunfermline Tel: 01383 733353

SOUND CONTROL
Edinburgh Tel: 0131 557 3986

SOUND CONTROL
Glasgow Tel: 0141 204 0322

SOUND CONTROL
Manchester Tel: 0161 877 6262

SOUND CONTROL
Newcastle Tel: 0191 232 4175

STIRLING AUDIO
London NW6 Tel: 0171 624 6000

TURNKEY
London WC2 Tel: 0171 379 5655

HHB

HHB Communications Limited

73-75 Scrubs Lane · London NW10 6QU · UK
Tel: 0181 962 5000 Fax: 0181 962 5050 E-Mail: sales@hhb.co.uk
Visit HHB on line at http://www.hhb.co.uk

FROSTBITE PRODUCTIONS
Andy Hewitt
"... marvellous - I don't know how I ever got along without it ..."
Dave Dueman
Tom Stanley
John Jones

THE HHB CDR800. NO.1 IN CD RECORDING.

When we launched the world's first affordable pro quality CD recorder, we thought we might have a hit on our hands. But even we've been amazed at the popularity of the CDR800. Thousands of machines are now in daily use around the world in every conceivable application (and some we could never have conceived of!). You're kind enough to tell us how you love the way it sounds, that superior build quality makes the CDR800 exceptionally reliable, and that pro-features like balanced analogue inputs, an AES/EBU digital in and 5 simple record modes with built-in sample rate conversion are essential for the ways you work. So we'd like to say thanks for making the HHB No. 1 in CD recording.

HHB Communications Ltd · 73-75 Scrubs Lane, London NW10 6QU, UK · Tel: 0181 962 5000 · Fax: 0181 962 5050 · E-Mail: sales@hhb.co.uk
HHB Communications USA · 626 Santa Monica Boulevard, Suite 110, Santa Monica, CA 90401, USA · Tel: 310 319 1111 · Fax: 310 319 1311 · E-Mail: sales@hhbusa.com
HHB Communications Canada Ltd · 260 King Street East, Toronto, Ontario M5A 4L5, Canada · Tel: 416 867 9000 · Fax: 416 867 1080 · E-Mail: sales@hhbcanada.com
Visit HHB on line at: http://www.hhb.co.uk

HHB

DISTRIBUTION

IN BRIEF...

If you're in the market for rare synths, organs, drum machines, outboard, and other bizarre toys, be sure to check out the next Vintage Electrical Musical Instrument Auction in early November. Of particular interest this time 'round is a collection of classic old German technology, including Siemens, Telefunken, and Neumann. More from Peter Forrest: 01363 774627

DJ/producers Coldcut and Cambridge-based company CamArt have jointly developed a new 'fun' software tool which allows users to play with audiovisual samples and collage them together to make their own remixes. Called VJamm, it's due for release in January '99, and will come with a CD-ROM full of video clips, as well as being compatible with other AV samples. More from Ninja Tune: 0171 357 7180

We at *The Mix* always take great satisfaction in helping to launch new production careers, so it thrilled us no end to draw these lucky winners of our Producer Book competition. Copies of *How To Become A Record Producer*, by David Mellor, are winging their way to Minna Kari of Finland, C.A. Baker of Liverpool, Graham Kinsman of London, and Werner Scheiblich of Germany. We'll be looking out for those names on album credits... For those of you who didn't win, you can purchase the book from PC Publishing: 01732 770893.

The new Sound Blaster Live! card (£149) for PC is now available from Creative Technology. Aimed at games, music, and movie applications, the card's audio processor engine provides 32-bit DSP to produce real-time effects, and, according to Creative, the processor "is capable of re-creating concert-like music productions". More from Creative Labs: 01245 265265.

In last month's review of Tascam's TM-D1000 digital console we stated that a TDIF to ADAT converter would set you back 'probably half the price of the desk itself'. Tascam obviously foresaw this particular problem, and have just informed us that they'll be releasing just such a converter for only £175. More details next month.

d8b arrives at last!

Industry bigwigs gather for Mackie's 'launch of the year' at Abbey Road

It's been a long time coming, but Mackie's Digital 8 buss (the 'd8b') has finally hit the UK. Distributors Key Audio Systems chose Abbey Road Studios as the venue for what is one of the most important product launches of the year. Greg Mackie was there in person to present his latest brainchild, along with Peter Watts, Head of Engineering and Bob Tudor, Head of Software Design. Bob gave animated demonstrations of the console, including the total automation system,and full surround sound mixing, while a second production desk was on show in the live area for visitors to try themselves. Mackie HR824 active reference monitors were used throughout.

The two-day presentation of the d8b was attended by 160 key industry figures, including Alan Parsons, Andy Jackson, John Leckie, Hugh Padgham, Paul Carrick, Neil Davidge, Mick Glossop, and representatives from several major studios. The general public will get a chance to see the Digital 8-Buss in action during October and November, when Key Audio Systems will be taking the desk on a tour of all UK digital dealerships.

Look out for a full hands-on review in *The Mix* soon; but in the meantime here's a reminder of the d8b's enviable features list:

Brief spec: Mackie d8b

- 48 input channels (with addition of optional I/O cards)
- 4-band fully parametric EQ, gate and compressor available for every input channel
- Up to 72 physical inputs
- Total recall of all parameters, and total dynamic mix capability onboard through use of computer, hard disk and floppy drive as standard
- SVGA graphics card built-in, plus mouse and keyboard ports
- Full surround mix capability up to 7.1 format
- Plug-in effects hardware and software architecture
- Ethernet connection for linking mixers and sharing mix data remotely

More from: Key Audio Systems
Tel: 01245 344 001
Fax: 01245 344 002
Email: info@keyaudio.co.uk

Greg Mackie, Peter Watts and Bob Tudor with their new baby

DVD DEMYSTIFIED

It's being hyped like crazy by all of the major electronics companies, so that probably means that DVD will be the next big format for audio and video. But what machine should you get, and are there any titles available yet? These questions and more are answered by a new magazine from the makers of *The Mix*, on sale in November.

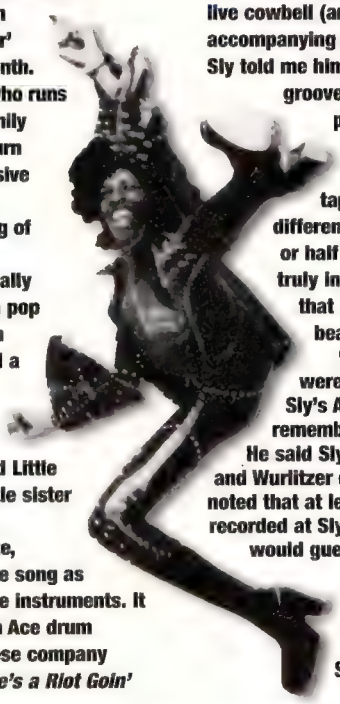
Put together by the bods on our sister mags *T3* and *Total Film*, *What DVD* contains everything you need to know about the new format. The magazine includes reviews of all the currently available DVD players and films, as well as a clear explanation of the technology and its benefits.

The players are reviewed by the experts at technology mag *T3*, while *Total Film* gives its verdict on the films themselves. It's an essential read for anyone considering investing in DVD.

What DVD goes on sale on Thursday 5th of November, priced at £2.95. You can order a copy on 01458 271111.

SLY REVEALS DETAILS OF AFFAIR

For anyone following our *Petsounds* series (see p. 104) , here's an interesting addition to the 'Family Affair' installment we ran last month. We contacted Jon Dakss who runs the official Sly and the Family Stone website, and he in turn spoke directly to the reclusive genius Sylvester Stewart himself about the recording of 'Family Affair'.



Jon says: "Sly was actually the first artist to release a pop music single which used a drum machine, then called a rhythm box. The first song, 'Somebody's Watchin' You' was recorded by a group called Little Sister (fronted by Sly's little sister Vaetta Stewart), and was released in 1970. Sly wrote, produced and arranged the song as well as playing most of the instruments. It featured the same Rhythm Ace drum machine (made by Japanese company Acetone) he used for *There's a Riot Goin'* *On* and *Fresh*.

"On 'Family Affair' I believe there is a live cowbell (and live drums) accompanying the drum machine track. Sly told me himself that to get that drum groove (the Rhythm Ace only has preset tracks) he had to record the song on one setting, then rewind the tape and either play a different track or play one at twice or half the speed as the other – truly innovative, as nothing on that box was as funky as the beats Sly made it play!

"The electric piano parts were played by Billy Preston. Sly's A&R man Steve doesn't remember what the keyboard was. He said Sly used both Fender Rhodes and Wurlitzer electric pianos. He also noted that at least the piano part was recorded at Sly's home studio in Bel Air. I would guess that most, if not all, of the tracks on that song were recorded there and not at CBS Studios."

You can check out the Sly Stone website at: www.slyfamstone.com

CD-R does double-act

Philips throw down the gauntlet with sub-£400 dual-deck consumer CD-R

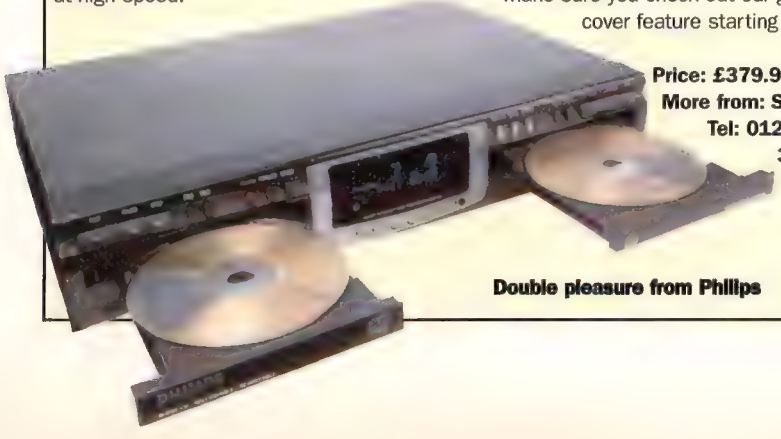
Things just keep getting hotter and hotter in the CD-R market, and now Philips have stirred the coals by releasing a dual-deck stand-alone audio CD-R for just £379.99.

The CDR765 has a fully spec'd recorder/player coupled with a playback-only deck. Both decks are CD-R and CD-RW compatible. Philips say "This is the perfect recorder for musicians to master their work to CD, and then to make copies at high speed."

Brief Spec: CDR765

- Dual deck (CDR + CD)
- Records/plays CD-R and CD-RW discs
- Plays standard audio CDs
- Double speed recording (disc-to-disc)
- 2-disc simultaneous playback
- 2-disc random playback
- Direct line recording
- Separate outputs for CD-R and CD

If you're thinking of buying a CD-R, make sure you check out our group test cover feature starting on p. 27.



Price: £379.99
More from: SRTL
Tel: 01243 379834

Double pleasure from Philips

PROTAPE datastore

15 PERCY STREET LONDON W1P 0EE

THE ULTIMATE MEDIA STORE

BASF DIGITAL MEDIA RANGE

MINI DISK Master

Product	1+	10+
MD 74	1.49	1.39
Pro MD 74	2.39	1.89
Mini Disk Head Cleaner		8.89

CD-R/CD-RW Master

Product	10+	20+
CD-R	.99	.93
CDR / W	6.49	5.95
DVD-R	T.B.A.	

AUDIO DAT Master

Length	1+	10+
15	2.49	2.26
34	2.75	2.51
48	3.09	2.81
64	3.29	2.99
94	3.73	3.39
124	4.21	3.83

DTRS HI 8 Master

Length	1+	10+
DA 30	Call for Price	
DA 60		
DA 113	7.95	7.55
DTRS Head Cleaner		8.51

ADAT Master

Length	1+	10+
DA 40	7.19	6.86
DA 60	11.85	11.26
ADATs come in a library case		

OTHER SPECIAL OFFERS

Iomega Zip Disk (Mac or PC)		6.49
Iomega Jaz 1Gb (Mac or PC)		54.55
Iomega Jaz 2Gb (Mac or PC)		94.90
Unbranded CD-R 74 in Jewel Case	10+	0.89
Unbranded CD-R/W 74 in Jewel Case	10+	4.45
CD-R 74 Consumer Disk (Phillips 870 etc.)		1.99
MDD 140 Mini Data Disc for 4 track	10+	7.80
CD labelling Kit Includes Software, Applicator and Labels		24.95

CALL FOR DLT AND SYQUEST PRICES

Nationwide Next Day Delivery

To Place Your Order Call 0171 323 0277

RAFT OF NEW PRODUCTS FROM LA

LA Audio have announced eight new products, so whatever your preference, they've probably got a processor to match!

LA Audio's line of outboard ranges from the retro appeal of valve or FET compression, through solid-state analogue preamps and recording channels, to the cutting edge cleanliness of digital dynamics. The bods in R&D have been busy, obviously.

First, the pro series range gets a couple of EQs to add to its catalogue. The EQ231-G is an upgrade of the existing EQ231-SPR, a dual, third-octave graphic equaliser. The EQ231-G contains all the basic ingredients, but without the frills. The good bit is that it's modular, so you can add extras whenever they are needed, and nobody has to pay for unwanted features. The optional extras include output transformers, and a dynamics board with gating and limiting. In LA-speak, a fully expanded EQ231-G becomes a EQ231-GSP.

Another new EQ in the Pro-series range takes technology one step further; into the digital domain. The DigEQ is packed with professional features, right from the busy back panel with balanced analogue I/O, AES and S/PDIF digital I/O, plus MIDI, Mac and PC control inputs that can control up to 30 slave channels from one master unit. A large LCD display gives a full picture of the EQ settings, and as an added bonus, you get compressor/limiter and expander/gate processes thrown in.

LA Audio's Millenium series has not been left out of this product bonanza. This is where professional features and budget prices come together for the good of humanity. New here is the ADX2 24-bit A/D converter, the PS-1 recording channel, the SPX2 source selector/pre-amp, and the TCX2 valve compressor. In particular, the ADX2 should do well, considering the growing demand for 24-bit conversion at a reasonable price. This stereo unit features electronically balanced inputs, word clock input, and a choice betwen AES/EBU, and S/PDIF optical and coaxial outputs.

DigEQ: packed with pro features and controls galore

The Millenium series PS-1 Pro channel strip has seems to have everything you need for discrete, direct recording, and then some. A microphone pre-amp (line or DI inputs) is followed by de-essing, downward expansion, compression, and an EQ section. A 24-bit D/A conversion module is available as an option.

On to valves but still with the Millenium series, LA Audio have added the tube-sonics TCX2 valve compressor. The TCX2 is a dual unit (linkable) that uses two valve stages per channel, with variable input, threshold, ratio, attack, release, and gain make-up controls. Attack and release are variable rate, auto sensing, intended to give the user good control but without the headaches.

Lastly, FET (field effect transistor) -based compression comes back to visit us inside the new addition to the LA Audio Classic series. The Classic 1 FET compression is still a sought-after but increasingly rare technology. The Classic 1 is aimed at large recording or post-pro studios and offers an optional 24-bit A/D converter to help them make their minds up.

Prices:

Pro series

- EQ231-G basic 31-band graphic: £938.83
- EQ231-GSP expanded 31-band graphic: £1,173.83
- DigEQ digital graphic/parametric EQ: £1,292.50

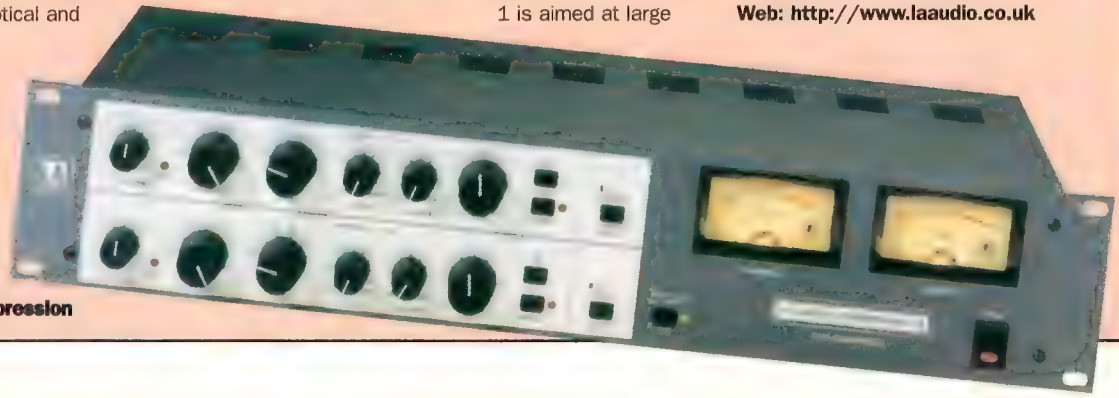
Millenium series

- ADX2 A/D converter: £299
- PS-1 Pro channel strip: £468.83
- SPX2 stereo source selector: £299
- TCX2 valve compressor: £299

Classic series

- Classic 1 vintage FET compressor: £938.83

More from: SCV London, 6-24 Southgate Road, London N1 3JJ Tel: 0171 923 1892 Fax: 0171 241 3644
email: sales@laaudio.co.uk
Web: http://www.laaudio.co.uk



Classic compression

EDUCATION NEWS

FXP studio manager Dave Howard (seated) with programmes manager Chandy Chauhan

London's **Community Music** have launched a new scheme which they hope will bridge the gap between excellent musicians and a successful career. Called Young Producers, it will provide selected participants with a £5,000 bursary, access to training and studio facilities at the University of Westminster, studio time at major recording facilities, and business and legal help. Each student will have a mentor from within the industry.

Ten participants per year will be selected for Young Producers, which will run over the next three years. Programme manager Alison Tickell said "We are seeking individuals who have had their talents recognised by someone working in the music industry but who still needs assistance in planning their career." To apply, you need to be living in the Greater London area, have demonstrated exceptional talent, and be able to identify specific aims you wish to achieve by attending the course. Closing date for applications for the January 1999 intake is December 4th.

More from: Community Music
Tel: 0171 234 0900

Leicester's **International Youth House Project** is an educational and training facility which boasts new audio labs and a pro recording studio amongst its many attractions. The studio is based around a 96-input Otari Status console and Radar II hard disk recording system, with Dynaudio M3 monitors and outboard from Lexicon, Focusrite and SPL, while the audio labs have workstations running Cubase VST and Logic Audio. The Project offers a wide range of training, both informal and accrdited.

More from: Dave Howard
Tel: 0116 255 1554

Asian Dub Foundation: supporting Community Music

LOST IN CYBER-SPACE?

The Internet may be the largest music store, encyclopedia, and software library in the world, but it's of no use if you can't find your way around. That's where *Music on the Internet* comes in. The latest book by *The Mix* writer Ian Waugh, it'll show you how to:

- **Find free music software and demos**
- **Get updates for your existing software**
- **Find out about new products**
- **Get help from manufacturers, developers, and fellow musicians**
- **Use newsgroups and mailing lists**
- **Power search the web like a pro**
- **Download software**

Price: £15.95
More from: PC Publishing
Tel: 01732 770893

We have five copies of *Music on the Internet* to give away. Send your details on a postcard to: Internet Book, *The Mix*, at the usual address.

Navigate the web with the help of Waugho's book

yELLOW!
INTRODUCING THE FUNKIEST NEW THING IN PRO AUDIO!
£137
(excluding VAT and delivery)
HOOTER SOUND Ltd.
Mic Amp/Compressor/Limiter/Gate
B1
The B1 will radically improve the quality of your recorded instruments and vocals. It has all you need to achieve a professional sound on recordings and live performances.
Go to www.hootersound.com
Hooter Sound Ltd. Quay House, Quay Road, Newton Abbot, Devon. TQ12 2BU.
~SALES TEL : 01626 333234 ~fax : 01626 333157 sales@hootersound.com

National music Show '98

NATIONAL MUSIC SHOW UPDATE

The biggest public music show is back at Wembley on November 27-28-29. We preview this year's events...

The National Music Show is getting ever closer, and more attractions are being added daily to the programme. Check out the bottom of the page for your chance to win £££s-worth of recording gear in our Gear Of The Year competition, in which you vote for your favourite kit launched in 1998.

In the meantime, here's an update of the attractions you can expect to see at Wembley on the 27th-29th of November:

IN THE BIN

Featuring a panel of recording industry professionals, we search out the best demo tape... and trash a few others along the way! Guaranteed to be even more spectacular than ever this year.

JAMES TAYLOR QUARTET

The acid jazz band who brought you 'Starsky & Hutch' and other classics will be playing live and in person on Sunday the 29th. Be sure to get down and shake your booty!

AREA 51 SEMINAR

Still puzzled by computers and music? Here's your chance to get some expert guidance from retailers Area 51, experts in all things computers and music.

MAJOR MANUFACTURERS

If you don't (or can't) get out too often, then the NMS is your opportunity to try out the latest hi-tech and recording equipment all in one place. All the major manufacturers, including Spirit, Fostex, Roland, Yamaha and Korg will have their latest products on display, so come down and have a play with all the toys.

WEBSITE

You can keep up to date with what's happening at the show on the official NMS website. Point your browser at:
www.nationalmusicshow.co.uk

TICKET HOTLINE

To avoid disappointment, book your tickets now for the National Music Show. Tickets are £6.50 (adult) or £3.50 (children) in advance.

01369 708010

VOTE AND WIN! VOTE AND WIN!

Vote for your favourite studio kit of 1998 and you could win a fantastic prize, in our second annual Reader Awards

It's the moment the manufacturers have been waiting for all year! At this year's National Music Show *The Mix*, along with all our sister titles – *Future Music*, *Guitarist*, *Total Guitar*, *Guitar Techniques*, *Rhythm*, and *Bassist*, will be delivering the verdict on what you, the readers, have voted the best gear of 1998. And every reader who votes will be automatically entered into our prize draw to win some tasty studio kit.

There are six categories in which you can vote:
Best Mixer (under £2,000), Best Mixer (£2,000+), Best Recorder (under £800), Best Recorder (£800+), Best Signal/FX Processor (under £500), Best Signal/FX Processor (£500+)

Entries must be received by 14 November 1998. Send to: Gear Of The Year, *The Mix*, Future Publishing, 30 Monmouth St, Bath, BA1 2BW. Employees of Future Publishing and their relatives may not enter.

GEAR OF THE YEAR 1998

YOUR NAME

YOUR ADDRESS

YOUR DAYTIME TELEPHONE NUMBER

YOUR VOTES

Best Mixer of 1998 (under £2,000)

Best Mixer of 1998 (£2,000+)

Best Recorder of 1998 (under £800)

Best Recorder of 1998 (£800+)

Best Signal/FX processor (under £500)

Best Signal/FX processor (£500+)

GEAR OF THE YEAR 1998

Sony's perfectly Abbey

The penthouse suite at Abbey Road is now equipped for surround sound

Abbey Road studios are staying "one step ahead of the game", in the words of director of operations Chris Buchanan, with their recent purchase of a 24-bit Sony PCM-3348HR digital 48-track recorder.

The new unit provides 48-channel recording at 24-bit quantisation. It will be primarily used in the complex's penthouse studio, which has been configured as a surround-sound digital mix room.

The recorder will also be transported from one studio to another, and its analogue I/O interface cards will enable it to be used with both digital and analogue mixing consoles.

More from: Abbey Road
Tel: 0171 266 7282

NET NEWS: LIFE ON THE ROAD...

Who needs it? Not, it seems, the original bad boys of rock. Influential '60s rockers The Pretty Things took to the net in September to promote the re-release of their rock opera *S.F. Sorrow* (which, incidentally, pre-dated The Who's *Tommy*). 10,000 punters saw the group perform the album live on a simultaneous worldwide netcast from Abbey Road studios, with Pink Floyd's Dave Gilmour guesting on guitar and 'crazy' Arthur Brown narrating.

Two weeks later, Queen's Roger Taylor launched his new album *Electric Fire* with an exclusive live internet gig from his Cyberbarn studio. The site recorded 595,000 hits during the concert, which was broadcast via MediaWave and Real Networks.

***The Guiness Book of Records* has now opened a record for "the largest on-line concert", which was duly awarded to the Taylor gig.**

roger taylor
Welcome...
"A message from Roger...
'Thanks for visiting my new website. I hope you enjoy looking at all the different sections and listening to the music from my new album 'Electric Fire'. You can also send me your questions and please take part in the competition which takes place when the album is released on September 28th. I hope to hear from you."
cyberbarn

Ever wondered why the quality of PC audio recording systems is generally so poor? - One word: Jitter! Now here's the solution: The Aark 20/20 from Aardvark, the makers of the professional digital master clock generator, the AardSync II.

This is a multichannel system with eight 20 bit A/D & D/A's plus SP/DIF i/o - 10 simultaneous channels of record and playback. The software includes standard Windows drivers to fully support Sound Forge, Emagic, SEK'D, Cool Edit Pro, Cakewalk, etc... Plus custom ASIO drivers for Cubase VST.Then the control panel includes comprehensive routing and mixing. **It's simple to use, quick to install, and the audio quality will blow you away!**

The Aark 20/20 comes complete with HOST PCI card, 10 channel AD/DA/digital i/o interface box, interface cable, control panel software and Samplitude Basic by SEK'D, multichannel audio editing CD-ROM. - That's everything you need to turn your PC into a high quality multitrack audio recording studio!

It's in stock now, and will cost you well under eight hundred pounds. Ring us and we'll tell you where you can get one today.

MUSIC CONNECTIONS

MC online
24 Hours a day
Up-To-Date
Information
On The Hi-Tech
Pro-Audio Market
www.mconline.co.uk

MC Online
A Music Connections Company

When you invest in a computer, be it for a semi-professional application, or a totally integrated professional situation, it isn't something you can pop down to your local consumer store, take off the shelf and slot into your set-up. There are a number of important factors to be considered to ensure the integration will be smooth and trouble-free, when you're supposed to be working you don't want to know if your disk access time is correct or that your possibly going to have IRQ conflicts.
This is why at Music Connections we take the time to establish exactly what your personal needs will be and how to adapt the system to your current environment. Only when we have this information will we start to construct a system that we would be happy for you to take home and use. However, before we allow you to leave any of our premises the unit will be extensively bench tested to make sure it works 100% (this is something your local computer store will not do.)
A PC system believe it or not is quite a delicate item and you will need constant hand-holding, we know from many customers that whilst many computer stores are very cheap on pricing, after-sales can often leave very much to-be desired. Also very often our prices are no worse than many large computer stores.
So if any of this is of interest and you would like to arrange a meeting with one of our specialists please give your local Music Connections store a call

Dedicated Computer Systems

PC & MAC SPECIALISTS

ddrum 4

nord MODULAR

Clavia must now be one of the most renowned synth manufacturers in the world, and after their success with the ground-breaking Nord Lead and rack version thay have gone from strength to strength. Nord Lead 2 has been designed to add and improve features of the original whilst still keeping the feel and quality. The Nord Modular is the most versatile synthesizer ever. As with the old patchcord method of synthesis, the Nord Modular makes practically any synth you want without messy wires and diagrams.

NORD RACK 2
£795

NORD LEAD 2 KEYBOARD
£995

t.c. electronic

lexicon

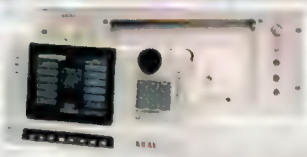
NEW

PCM-81
£CALL

MPX100
£225

TASCAM
M1600 mk2
£799

AKAI



NEW S6000
call now

MACKIE

d&b

Roland

Check out the new Roland range at Music Connections Featuring the JV8080, SP808 and VS Series, you'll see all their latest products at all of our stores.

If you rely on Pro Tools, Mackie's HUI studio console can boost your productivity and your creativity!

Call in and find out how.

digidesign
Avid
PRO TOOLS

DIGITAL 8 BUS
NOW IN STOCK
CALL FOR DETAILS!

VISIT OUR NEW
FULL WORKING STUDIO
AT CHELMSFORD

Visit Our New
Herts Store
Now Open

Every Store
equipped with
the latest equipment

Next Day
Delivery
on selected items

CHELMSFORD - 01245 354777
ASHWELL - 01462 743300
LEEDS - 01943 850533

7 Stores Nationwide - London Prices Nationwide

www.mconline.co.uk

YAMAHA 02R £4495

03D £1899

A3000 £899

Tria £699

20/20 £299

20/20bas £599

AKG

WE WILL BEAT ANY ADVERTISED PRICE ON THESE MICS!

MARANTZ

CDR630 £639

WARNING! THIS IS NOT A TOY!

SOLID TOBE

RØDE

NT1 £185 NT2 £369

NEUMANN TLM103 £CALL

ALESIS QS6 £499

QSR - £475

TANNOY NOW ONLY £189

TR-Rack £699 KORG

AKAI S3000XL £899

CD3000XL £995

ALESIS FOSTEX

We will beat any price on Alesis ADAT's and Fostex DAT machines including Hard Disk Recorders!

AMAZING PACKAGE DEAL!

ADAT LX20

ALESIS STUDIO 32 DESKTOP RACK 8-WAY LOOM

PLUS 2 ADAT TAPES

ONLY £1995

AKAI

DPS-12 PACKAGE 4 GIG DRIVE & EFFECTS BOARD

£1299

NOW EVEN GREATER VALUE!

FREE TUBE MP & AKG MIC!

AKAI

SHOP SOILED DR8 3 ONLY...£1295

STUNNING DR16 DEAL JUST £2495

novation

Novation's Supernova has been in development since early 1997 and now has some of the most astounding features to ever appear on an analog synth. A 16 note polyphony, flexible effects structure, 8 audio outs and full MIDI control are just the starting points.

And don't forget Novation's other stunning products, the BassStation and the DrumStation.

Don't miss out, call now for more details

GROOVE TUBES
SONIC FOUNDRY
marantz
RODE
lexicon
TANNOY
KORG
MACKIE.
YAMAHA
AKAI
Roland
FOSTEX
CLAVIA
EVENT
GENELEC
TASCAM
Focusrite
novation
BEHRINGER
audio-technica
Steinberg
digidesign
ALESIS
AKG
ART
E-MU
MOTU
t.c. electronic
JOEMEEK
JOMOX
OPCODE
CAD

Crosby Court, 27-27 George St, Birmingham B3 1RG

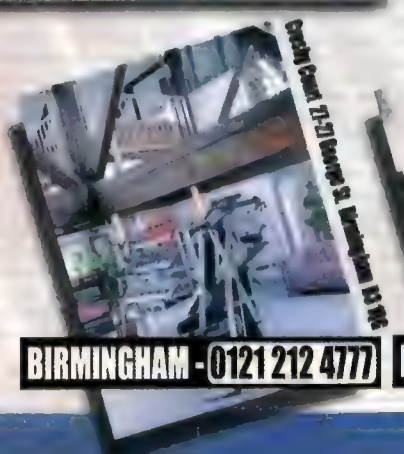
The Mall, Clifton Village, Bristol BS8 4JG

202 New Kings Road, Chelsea, London SW6 4NF

MUSIC CONNECTIONS

Unit 4, Kingsgate St, Kings Street, Southampton SO14 1HL

BIRMINGHAM - 0121 212 4777 | BRISTOL - 0117 9467700 | LONDON - 0171 731 5993 | SOUTHAMPTON - 01703 233444



OPEN MIC

Sponsored by SHURE microphones

Got something on your mind? Well, here's your chance to have your say, and win a snazzy Shure jacket into the bargain. *Open Mic* is an interface between you, other readers, the audio industry, and us. So let's be 'avin your letters, then!

Sound Bites

We want the dirt; we want your anger, your opinions, your experiences, and your reactions. A sentence or a saga, it doesn't matter; everyone stands a chance of winning that Shure jacket for *Letter of the Month*

On the up
Do you really want 96kHz, 24-bit to arrive as a new standard? Isn't CD-quality good enough?

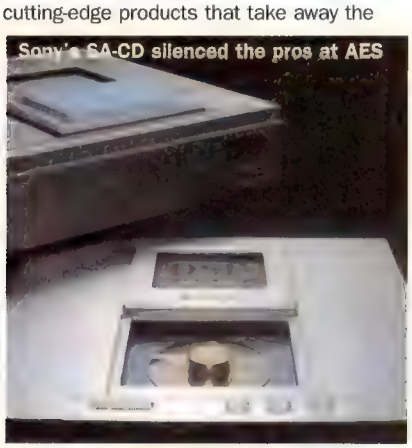
All change
Where do you draw the line on software upgrades? Do have any trouble getting your free bug fixes? Do we now expect bugs in our software, or is it time manufacturers improved their beta-testing?

Write to us: *Open Mic*, *The Mix*, Future Publishing, 30 Monmouth St, Bath BA1 2BW
Or email us: themix@futurenet.co.uk

Show stoppers

Hot-foot from the 105th AES convention in San Francisco, our technical editor Paul Mac has a few things to say...

The AES convention is not an ordinary trade show, it's a convention, full of Audio Engineers, heads swimming with progress, technology, and the idea that sound is a worthy cause... oh, and hundreds of new cutting-edge products that take away the breath of even the most hardened cynics.



Sony's SA-CD silenced the pros at AES

Alan Parsons got the proceedings underway with a keynote speech at the opening ceremony. He didn't pull any punches, stating his concern at the inferior audio quality of first-generation DVD machines; telling everybody that the "mega-studios have lost," (a reference to the upsurge in the home-based project studio); and in answering a question from the floor on surround sound he said "I detest the centre channel", and asked what someone should have asked long ago: why does such a hi-fidelity system manifest itself in the home with inferior-quality rear speakers?

As expected, most manufacturers were promoting their 96kHz, 24-bit capability, with a profusion of converter boxes to match, but the talking points were already set: DVD-Audio, surround-sound provision, and Sony and Philips' new Super Audio CD format (SA-CD). The latter one was a surprise hit. By Saturday, seats for the demo sessions were scarce.

The starting point is DVD-Audio. Representatives from the WG-4 working group on DVD-Audio summarised their progress towards a standard that could sit alongside DVD-Video in the household. It had answers for many of the 13 technical requirements set out by the International Steering Committee (ISC) for high density audio discs. What started out as a low-key report got quite heated at one point, as a member of the audience pointed out that provision for a maximum of six channels didn't really do much for 7.1 surround! Somebody else told him to be quiet.

For maximum flexibility, the DVD-Audio standard is set to include provision for sample rates from 44.1kHz up to 192kHz, bit depths from 16-bit to 24-bit, and from two to six channels. So that lesser-specified machines can play high definition audio, 12 'down-mix' coefficients have been identified, to be chosen somewhere in the production cycle of individual recordings. There is also extensive AV and multimedia capability.

But hold on... here comes SA-CD! It's an alternative system that does away with the PCM audio that DVD continues to employ, replacing it with the new Direct Stream Digital (DSD) technology. In essence, this does away with the filters necessary to turn the bit-stream from delta-sigma conversion into PCM and back again – it's the digital equivalent of minimum signal path.

The key points are easy. First, it's got a 2.8224MHz sampling rate. There are good technical reasons for this, including easy 'down-conversion' to existing PCM rates. Second, it's backwards-compatible. The disc has two 'layers' – one for DSD, and one for existing CD players, so you can start buying DSD discs without buying new hardware. The CD layer is down-mixed from DSD material, so it's higher quality audio from your existing machine.

Now, if this all seems like a classic Betamax/VHS battle, then it could be, though with some complications. First, DVD-ROM is here to stay, and DVD-Video is making some significant inroads to the consumer market. However, the audio side is complicated. With such a wide range of possibilities, how do you know what you are buying? Also, is PCM really the way forward for audio in the next millennium?

SA-CD is certainly impressive. The demo silenced a crowd of industry professionals, and the advantage of versatility at a consistent quality is undeniable. The backwards-compatibility idea is sure to win friends – no need to change the world in one go, just ease into a new audio quality. As it is, SA-CD is still at a consultative stage, but the mastering and playback prototypes are already ready for another Sony/Philips revolution.

Whatever happens, new technology at this level means new technology in the studio. Are there any predictions about the prospects for mega-studios now? Maybe they are about to have a renaissance? The low-cost digital mixer is certainly capable of adapting to surround sound, but the new conversion and mastering requirements are another matter.

A final word from San Francisco must include the observation that DVD-Audio and SA-CD are based on the very same International Steering Committee requirements for high density audio discs. The moral? Steering by committee is not always conducive to staying on the road.
Paul Mac

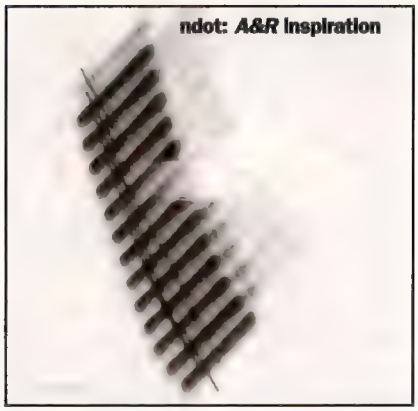
Any thoughts on any of these points? Drop us a line at *Open Mic*.

AES: swimming with progress

Reader review

Well, you asked me for a mini review of my most treasured bit of kit. I don't mind you getting personal, but I'd rather tell you about my audio equipment. My favourite signal processor is still my Zoom Studio 1202. It is the perfect tool for the small-time music-maker, and I love it to bits. What's more, it has more features than a Renault Clio, and it's a fraction of the cost.

However, as we progress into the digital age, I am using my Apple Macintosh more and more to do things I like doing. Having used PCs since I was ten, I don't like provoking the PC versus Macintosh wars, but I have to say that since the day I got my Mac, I have had stunning performance from it – it's fast, it never crashes, it never has any problem with running multiple applications, and with a Zip drive and a decent MIDI interface we've had some great times together. To anyone out there planning to buy a computer, get a Mac.
The Boom Boom Man, Salisbury


ndot: *A&R* inspiration

The Boom Boom man is becoming something of a regular in the *Open Mic* pages – maybe he's after his own column? Anyway, we want more reader plugs for their favourite bits of kit (sorry, music gear), so keep 'em comin.

Success story

I have just read the *A&R* review of ndot by Nick Serre. It's a weird feeling when you open a magazine and there you are, but I was really impressed at the accuracy of the article. Nick had obviously listened to the CD a few times. The review has now given us the encouragement to really get off our butts and produce some good stuff. There's now one thing we can guarantee, you will be hearing more from ndot in the future!
Andrew/Mel, ndot, email supplied

We'll add ndot to the rapidly expanding list of artists who have been reviewed in *A&R Dept* and are destined for great things. Take Adrenalin Junkies, for example; they got a five album deal! Anyone else want to say nice things about us?

The final word (or is it?)

Don't the two guys complaining in the November issue about the Male Vocal II Samples have any sense of humour? I've never laughed so much – the guy who thought of "up and down like a cossack, baby" deserves the Ivor Novello award. I've even replaced all the standard Windows WAV sounds with these samples, and the effect has not yet paled! Come on guys, get an SOH transplant!
Nigel Beatty, Brighton

Ah, bless. Til' next month, then...

Letter of the month

Point to point

I just want to say that the magazine is great and often there are lots of good samples on the CD, but I think that that *Studio Series 11*, the male vocal sample CD with issue 54, really sucks. Do you really like the samples?. But some of the Supernova samples are nice. When is the synth sample CD coming?

Maybe it would be a good idea for *The Mix* to review an old synth in each issue, because so many people really love the old gear and like to read about it. Or you could write someting about a synth manufacturer. For example, the history of Yamaha – what were the famous synths and their specifications?
Sander Meyer, email supplied

Technical editor Paul Mac answers...
First thing's first, sorry you didn't like the vocals. Others did, but taste is taste, I guess. Hopefully the guitar samples on this month's CD will make up for it.

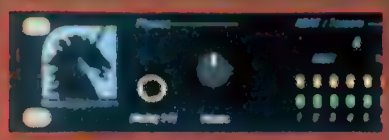
As for synths, we did analogue synths in the Studio Series volume 3 (with issue 46), though rest assured that more are in the pipeline.

Back in the old days, we used to do a series called Total Recall where classic synths were revisited and reviewed. We now have a couple of plans for reviewing classic gear, but with a twist. It'll be better and more useful than Total Recall. Watch this space.
Paul Mac

This Shure jacket beckons...

What classics would you like to see revisited in *The Mix*? Do you have any specific sample requirements that we could include in the *Studio Series*? Get yourself heard. Write to *Open Mic*, *The Mix*, 30 Monmouth St, Bath, BA1 2BW. Or email us: themix@futurenet.co.uk.

The NEW Studiospares catalogue includes much more



MIDI SAMPLERS SEQUENCERS & SOFTWARE

plus.....

Please send a 176 page catalogue to

Name.....

Address.....

.....

Post Code .....Mix

Studiospares

61-63 Rochester Place, London NW1 9JU
tel 0171 482 1692 fax 0171 485 4168

Studiospares Deutschland
Kölner Strasse 195-197, D-50226 Frechen, Köln, Germany
tel 0 2234 922 710 fax 0 2234 922 715

REVIEWS

This month... CD Recorder round-up, Hooter B1 mic pre-amp, Line 6 Amp Farm plug-in, TC Electronic Gold Channel, Quested UD1 monitors, and much more...

Who tests the gear
Our team of equipment reviewers are all audio industry professionals, experts in their chosen fields – engineers, producers, musicians, software specialists and audio journalists. This means that you can trust the opinions expressed in their reviews.

How the gear is tested
Wherever possible, the gear we test is used in actual sessions. Indeed, some of the biggest-selling records this year will have acted as testbeds for our reviewers. We believe that to truly evaluate kit properly, it needs to be tested in studio conditions – not a dark room!

Impartiality
Reviews in *The Mix* are in no way biased towards certain manufacturers. We will deliver an impartial verdict on a product whether or not a manufacturer advertises in this magazine. Our first duty is to you, the reader, and our goal is to give you the best possible advice on buying equipment. We will not hesitate in exposing sub-standard equipment.

THE MIX EDITOR'S CHOICE

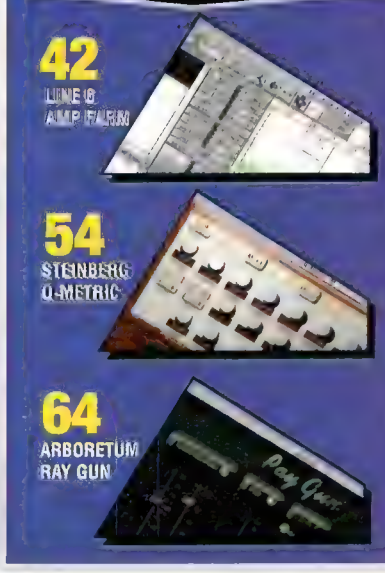
Products that are judged to be outstanding by our reviewers are awarded the 'Editor's Choice' tag. In a standard review, this means that the product offers exceptional performance for the price it retails for. In group tests, there may be two awards – 'Best Performance' and 'Best Value'. The 'Best Performance' award will go to the product that offers the best performance *Irrespective of price.* The 'Best Value' award will go to the product that offers the best price/performance ratio.

Hardware

39 HOOTER B1
46 SONY DPS-V55M
50 EMAGIC UNITOR 8
56 TC ELECTRONIC GOLD CHANNEL
61 AUDIO TECHNICA AT-4060
66 QUESTED UD1

Software

42 LINE 6 AMP FARM
54 STEINBERG Q-METRIC
64 ARBORETUM RAY GUN



FOSTEX

Easy Digital Multitracking And a real mixer!

Some things never change.....

If you're reading this magazine, chances are you're a musician. Not a rocket scientist, not a computer wiz, and certainly not a geek.

So why is it that the competition expect you to have a degree in button pushing just to get at the mid-band EQ or to adjust the aux send level of track 2?

With the new Fostex FD-4 you'll have no such hassle. It features a mixer with >105dB dynamic range (which is better than digital), 3-band EQ, balanced XLR mic inputs, insert points and 2 aux sends.

A real mixer. With knobs on!

And if you appreciate that, then you'll flip when you hear that the FD-4 offers all the other tools you need to make fantastic sounding and professional, uncompressed digital multitrack recordings while giving you the freedom to choose which media to use. External SCSI device or internal E-IDE hard drive*.

4 tracks of genuine CD quality (16-bit linear @ 44.1kHz) recording, easy copy, move & erase editing with undo (just like a word processor), built-in 2 track mastering mode, flexible sync facilities and heaps more.

Fostex have long had the knack of packing their multitrackers with innovative features, yet making them incredibly easy to use.

They also insist that your recordings are not compromised by compression techniques.

.....some things never change.

SCV London recommend SyQuest drives and media.

Recorder Section

- **True non compressed audio ensures outstanding quality**
- Media independent: Can record to external SCSI device or to internal E-IDE hard drive (optional)
- Extra L & R tracks. Stereo mix-bounce of 4 main tracks
- Track Exchange. 4 main tracks and L&R tracks can be exchanged
- 99 programs select
- Copy Paste, Move Paste & Erase. Non-destructive editing with Undo/Redo
- ±6% vari-pitch
- Digital input from 2-track source
- 2-track Digital out
- Digital output of up to 12 sources in remix
- MTC Slave, MIDI Clock & SPP out & MMC

Mixer Section

- **Real knobs - no multiple button pushes to make simple adjustments**
- 4 main input plus 4 monitor channels, 2 AUX sends & 2 stereo AUX returns
- Balanced XLR mic inputs (Ch 3-4) with trim control
- 3-band EQ with wide-band parametric MID

* Requires optional E-IDE fitting kit

Exclusively distributed in the UK by SCV London
6-24 Southgate Road London N1 3JJ
Tel: 0171 923 1892. Fax: 0171 241 3644
email: fostex@scvlondon.co.uk
web: http://www.scvlondon.co.uk

E&OE

CD-R SHOOTOUT!

Mastering your audio has never been easier. With CD-R you can go straight to the most popular medium without breaking the bank. We check out the top performers...

Recordable CD is the mastering medium of the moment. They've been around for some time now, but never in such an accessible package.

The selections we have for this round-up are all under £1500 (give or take £21, in the case of the Fostex). That puts CD-R fairly and squarely into the realm of the less expensive DAT machines, with the added advantage of lower media costs. In fact, the Philips machines almost compete with cassette recorder prices, so there's no excuses for not going digital is there? The reviews run through all aspects of the machines, from input and output connections, to the various record modes and methods.

A couple of issues stand out as particularly important however. First, there's disc compatibility. Most of the machines take the 'pro' discs (CD-R, CD-RW), which cost less than the consumer counterparts. The consumer versions (CD-RA, CD-RWA) cost slightly more because of MCPS payments, which cover the possibility of home copying. When buying discs, make sure you pick the right ones.

Another issue is SCMS (Serial Copyright Management System), a copyright flag embedded in the S/PDIF digital audio bit-stream. If it is set, you can't clone discs. The Philips machines always implement this, the Marrantz never does, and on the Fostex and HHB machines it is optional (copy prevention can work both for and against you).

We don't want to spoil any more surprises, so on with the reviews. Remember to check out the summary table, verdict, and late entry box on page 37 for all the facts at your finger-tips. ➤

FOSTEX CR200

COMPACT DISC RECORDER £1,522

We'll kick off our CD-R group test with a look at the most expensive of the bunch. *Trevor Curwen* finds out if it's worth its salt

The ability to record your own CDs is something that doubtless appeals to all readers of *The Mix*, and the various new stand-alone CD recorders that have come onto the market over the past year have made this a much more accessible proposition.

The whole idea of a CD recorder that can sit in a rack interfacing with all the studio equipment, or plugged into the hi-fi, is very appealing. It is a more verstile option than burning CDs using a computer with all that entails. In fact, with its ability to play back standard audio CDs, one of these units can serve a dual purpose by taking over the conventional CD player's studio role as a source for samples, or as a means of comparing mixes and works in progress against commercial releases.

With this new generation of machines the actual sound difference between different brands and models ought to be minimal when recording digitally. On-board A/D converters came into play when recording through the analogue inputs, which changes the picture a little, but most people looking to buy one of these machines will be less influenced by any perceived differences in sound quality and be more likely to choose on the basis of price and the range of facilities on offer. The CR200 is not the cheapest CD recorder around, but it does have a wide range of facilities including an AES/EBU digital input, not found on the less expensive models.

Overview

The CR200 is very nice-looking machine with a solidly-built, curved front panel and chunky controls. It's designed for rack-mounting, but would be best placed in an open rack with access to the back panel. This is because there are switches for various functions tucked away there. These switches control functions that would

SPEC SHEET

Frequency response:	20Hz to 20kHz
Playback	
S/N:	110 dB (EIAJ)
Dynamic range:	97dB (EIAJ)
Total harmonic distortion:	0.0027%
Channel separation:	100dB
Recording	
S/N:	90dB (analogue), 105dB (digital)
Dynamic range:	**90dB (analogue), 95dB (digital)**
Harmonic distortion:	0.005% (analogue), 0.003% (digital)
Wow - flutter:	Less than measurement limit
Weight:	6.2kg
Dimensions:	82 x 294 x 1134mm

probably not need to be accessed on a day- to-day basis, and for anyone with a fixed mode of working, they could be set and forgotten about. Nevertheless, poking about with a maglite and a screwdriver will be the order of the day for some.

Analogue audio comes in on both phonos and balanced XLRs, and a 3-way switch selects either line input (phonos) or +4dB or -10dB operating levels for the XLRs. Audio output is on phonos only, which is standard for CD players.

Digital inputs consist of S/PDIF coaxial and optical, and the professional AES/EBU format. There are also S/PDIF digital and optical digital outputs, plus a switch to turn these on or off.

To protect any recordings you might make from further digital copying, SCMS (serial copyright mangement system) can be implemented from a set of four DIP switches on the back panel. There are three modes to choose from: unlimited digital copying allowed, no digital copying allowed, or one digital copy only.

An 8-pin DIN socket is also provided on the back panel, for connection of a hard-wired remote control, although only a hand held infra-red remote is supplied with the unit. Mains power comes in on a standard IEC lead, and a rear-panel grounding post is provided for earthing purposes.

The CD tray, with its 'stable platter' mechanism that supports the whole disc surface, is situated centrally on the front panel below the small but completely adequate display that can be viewed clearly from all angles. The rest of the controls are logically laid out with the transport and manual record controls to the right, along with a headphone socket and its own level control.

The CR200 is a pro CD recorder in that it can use the professional CD-R blank discs rather than the more expensive consumer blanks, whose price includes a copyright levy. Domestic or consumer machines like the Philips CDR880 can only use consumer blanks.

Fostex identify five different methods of recording on the CR200. Three of these are automatic digital source recording with manual recording of both digital and analogue sources also possible.

The first mode of automatic digital source syncro recording is 'one track,' which is the most convenient mode for edited recording from a digital source, be it CD, DAT, MD or DCC. When the source equipment starts to play, only one track is recorded automatically and recording stops after that track. That is, at the point when the track changes to the next one in the case of a CD or MD, or when detecting the start ID of the next track in the case of DAT or DCC. In the absence of any of these flags, the machine will stop recording after 10 seconds of silence, or it can be stopped manually.

'All-track' recording is the second automated mode, for recording a CD-R from a whole master, like another CD or DAT. All tracks record automatically, and recording can be stopped manually after the last track, or will stop automatically after 10 seconds of silence.

The third Automatic mode is called 'DAT exclusive' and records the DAT's start IDs as track numbers. Care must be taken to ensure that the DAT start IDs are located prior to the Audio on the DAT, otherwise the start of a track may not be recorded correctly.

In 'manual digital source' recording, the recording is started and stopped manually using the record button and transport controls, like an ordinary tape recorder.

Both of those manual modes have different options available for writing track numbers, which can be undertaken automaticaly or manually by pressing the right button between tracks. In the case of analogue recording, automatic writing numbering detects a silent portion between tracks and writes a number there. You can adjust the sensitivity of this function so that spurious track numbers are not written in quiet passages of music.

When all the tracks are recorded onto the CD-R, finalisation can take place. This is the final processing necessary for making a CD-R disc playable on ordinary CD players, and takes about four minutes. On the CR200 this is very simple; just press the finalise button and then the pause button.

Playback functions are pretty much the same as you would find on any domestic CD player, with direct track selection available via the remote control and adjacent track search available from both the remote and the front panel.

In use

Using the CR200 was very easy in all modes. The machine senses the type of disc in the tray (CD-R or CD) and from then on it's simply a matter of choosing what input to record from and the recording method, and then just getting on with it.

Recording a whole CD (which to these ears was indistinguishable from the original) was accomplished very easily, the only drawback being that without stopping the recording manually an extra nine seconds of silence was encoded at the end of the last track, making both the total time and the length of the last track nine seconds longer than the original in the table of contents. This was a minor annoyance and not worth losing sleep over, but if there was some way of stopping the recording directly after the last bit of audio it would be welcome.

Recording through the analogue inputs was again easy, and the sound quality was excellent, although manually inputting the start numbers between tracks can be worrisome, as once they are recorded you are stuck with them and can't start over, as with a R/W disc.

Verdict

This is obviously a very good professional CD recorder. It has all the necessary facilities, is easy to use, and is constructed to a high standard, so should be a rugged and reliable workhorse in a busy working environment. Does it justify the high pricetag? Well, there's no doubt that for studios who want a durable and reliable CD-R, the CR200 will do the business. But bear in mind that this is a very similar machine to the HHB CDR-800, which costs a couple of hundred quid less. ™

More from: SCV London, 6 to 24 Southgate Road, London N1 3JJ Tel: 0171 923 1892 Fax: 0171 241 3644

FOSTEX CR200

WHAT WE LIKE

- Solid construction
- Straightforward to operate
- Complete range of inputs

WHAT WE DON'T LIKE

- Switchable functions on back panel difficult to reach in a rack
- Manual could be more straightforward
- Does not use CD-R/W discs

OVERALL

High-quality, fully professional CD recorder.

HHB CDR-800

COMPACT DISC RECORDER £1,299

Pro users will appreciate the extra facilities the HHB CDR-800 offers. *Paul Mac* finds out what you get for yer money

HHB have built up one of the best, if not the best reputations for self-branded products. They have a huge service department, and no-one doubts their competence in the pro-audio market. That's a promising starting point, so let's get on with the review...

Overview

The back panel of the CDR-800 is very stylish – natty orange legending on a black background.The eternal unbalanced RCA and balanced XLR combination, minus a balanced output, cover the analogue options. You can choose the nominal input level with a back panel switch and put your trust in HHB's A/D conversion.

Digital practitioners get added luminary value with an optical I/O, over and above the standard AES/EBU and S/PDIF connections, and two back panel DIP switches control the subsequent copy bit status of any recording you make: unlimited, one generation, or prohibited.

In addition, there's a parallel connection for hard-wiring a remote, which includes all the basic transport functions, plus a 'manual track no. write' line (like writing start codes to a DAT on the fly).

On air

Some other stand-alone machines require the expensive consumer format disc before they'll even consider recording something. The CDR-800 uses the ordinary type, available at around £4. The affordability of this media may prove to be a major factor in the increasing popularity of CD-R.

The Sable Platter Mechanism built into the loading tray is now a familiar sight. It looks like a mini record platter and is designed to reduce vibrations in the disc, which should improve the frequency response.

We did playback A/B tests (straight comparisons) with other CD players. These revealed nothing startling, though. If anything, the CDR-800 was marginally brighter with better definition in the top end. We were comparing 'new out of the box' to 'conveniently sitting in the rack', so the B subjects were at a slight disadvantage because of ageing and possible deviation from ideal line-up, but ➤

SPEC SHEET

Frequency response:	2Hz to 20kHz
Playback S/N:	110dB (EIAJ)
Dynamic range:	97dB (EIAJ)
Total harmonic distortion:	0.0027% (EIAJ)
Analogue I/O:	XLR in, RCA (phono) in, RCA (phono) out
Digital I/O:	RCA phono (S/PDIF), balanced XLR (AES/EBU)
Dimensions:	19inch x 2U

➤ overall, the CDR-800 is a high quality playback machine at the very least.

If you use the S/PDIF input, the advantages of subcode to track number translation are yours, from CD, DAT, DCC, or MiniDisc. Neither AES or analogue input will allow it, though there is an threshold driven auto-numbering function, and an option of manual track numbering.

There are five recording modes in total. The first two cover single-track and all-track recording of a digital source by using the sub-codes from that source. Obviously, the one-track mode is safest as recording will automatically cease after one track. All-track will keep going until you stop it manually. The third mode is there especially for DAT sources and their start IDs. In all of these modes, recording starts on a new track when the first sound after the start ID is played. Why the CDR-800 should need a special DAT option when you also have to select the input machine is a mystery, but that doesn't mean there isn't a good reason.

The last two recording modes are manual, either digital or analogue. You take control with the transport buttons, as any incoming subcodes are ignored, and there are two choices for writing track numbers. The automatic mode uses a threshold and a preset time of silence to decide for itself where the track numbers go, or the user can just hit Write whenever is appropriate; and the next track number will be written at that moment.

That's all there is to basic recording on the CDR-800. Most recording functions on the CDR-800 will react after very few button presses, so none of the processes are anywhere near an ordeal. No matter how intimidated you have been about the supposed inconvenience of recordable CD in the past, the CDR-800 reacts like an old friend: predictably.

See no evil

The display is simple and informative. The track and time display doubles as a messenger for 'special status' and a variety of error messages. An input indicator shows both sample rate and type, and various mode indicators for transport record/play status shine brightly around the perimeter. Some may feel the metering is a little inadequate, with only eight segments plus clip indicators, though resolution is heavily weighted to the upper end of the scale so it's not as bad as it first appears. Also, analogue record level is controlled between a single level control and a centre-indented balance control, so there's no need to fiddle with separate left and right controls to maintain a balanced stereo image, when all you want to do is change the level.

Depending on your outlook, the CDR-800 is either simple and practical, or sparse. It's not festooned with features or even garnished with gadgets. Small matters like fade times, and the time it spends waiting for another track before it stops recording are not adjustable. The media doesn't allow for convoluted subcodes or track renumbering, so when you write you must be committed. There is one small mercy in the form of skip IDs, but for these to work the playback machine must support them, in other words, the CDR-800. In the same way DAT skip IDs work, you select tracks you don't want played back and they won't be. Of course, you could use the programmed playback instead, but it does work out to be a time-saver, especially if you've mislaid the remote.

Talking of remotes, the CDR-800 has one. Every control that couldn't be fitted onto the 19" of rack space has been squashed into a few inches of infrared commander, namely, numeric track programming buttons and facilities. Most front panel fiends won't miss them, though remote fans will be pleased to hear that the main transport functions, including record, are also on the handset.

Finalizing

A multi-session CD-R (one that you can add to later) cannot be a multi-session CD-R unless the table of contents is left well alone. That is, once the TOC is written, you can't write any more. While many CD players will play multi-session CD-Rs, some won't, because of the missing TOC. Thus, once you have finished writing your CD, you have to finalize it, or polish it off. The CDR-800 will finalize CDs with the touch of two buttons. Time taken to do this varies, depending on the recorded tracks; it can be anything between four and ten minutes, though you do get a countdown in the display window so you're not sitting and staring at a screen with your fingers crossed.

As we mentioned before, playback clarity is good, a bright sound with no obvious problems. We also tested the record quality in with a straightforward digital-to-digital transfer. For this we recorded some dry vocals from DAT, digitally, onto a HHB recordable CD and then compared the original to the recorded version. Obviously, this also tests the A/D conversion and output stages of both the CDR and the DAT, but as it turned out, both were identical to the ear; so full marks for the record quality. A/D conversion again was very good, tallying with the high end clarity shown in playback tests.

In essence, the CDR-800 works like any other 2-track recorder you've ever come across. Using the 800 is easy, but could be made less of a hassle if the digital synchro recording features were trimmed from three down to two: one-track and all-track. Regardless of the medium, all transport controls, I/O, and level considerations are directly comparable to tape or hard disk-based digital recording. Bear in mind that erasure is not possible; once audio or track numbers are written there is no going back, unless you start a new CD.

Verdict

When you buy a CDR-800, HHB supply one recordable disc, a remote, batteries, and two stereo phono cables just to get you started, which is a nice touch, but would you pay £1,299 for a CD-R? Well, for many people it would be an investment. The discs are pretty cheap, and it's unlikely that the CD format will die, at least for a generation or two.

You might want to compare the prices of SCSI based CD-Rs: You can get one with an interface and software for around £500. Those who master directly from a computer should seriously consider that option. On the other hand, everybody wants a 2-track recorder. CD-R offers convenient DAT quality on a cheap and popular medium, and the CDR-800 is well-positioned to snatch that particular market. ™

More from: HHB Communications, 73-75 Scrubs Lane, London, NW10 6QU Tel: 0181 962 5000 Fax: 0181 962 5050

HHB CDR-800

WHAT WE LIKE

- Build quality
- High quality audio in both record and play
- AES/EBU digital I/O

WHAT WE DON'T LIKE

- Hardware still seems a tad over-priced

OVERALL

For studios and other pro users, this is the obvious choice due to its durability and full feature set.

PHILIPS CDR880

COMPACT DISC RECORDER £360

If price is your main concern, you might want to try a less expensive domestic option. *Danny McAleer* asseses the Philips CDR880

CD-R GROUP TEST

The CDR880, like other CD recorders designed for 'domestic' use, isn't at all happy with standard CD-R(W) discs, requiring instead those intended for digital audio recording. Currently, these are vastly more expensive (as apart from anything else, they include a payment to the MCPS for copyright reasons), but with any luck, they will become less so as the format gains popularity.

Apart from the monetary difference, these recorders also prohibit the duplication of a digital device more than once using the same SCMS-copy protection that consumer DAT terminally suffered from.

Overview

When it comes to playing back CDs, the CDR880 has just about the same functionality as any other CD player; it can read all varieties of disc, including mixed-mode, and of course, even recorded CD-RWs too. However, the remote control is necessary for some operations, like fast forward and rewind (for which it has two speeds: 2x and 8x, selectable using the desired direction button in conjunction with the fast button for the latter speed). Programming the CDR880 or jumping to any track must also be performed using the remote control, as there is no duplication of the numeric keys on the front panel.

All the most important functions are on the front panel though, including basic transport control, record mode and the various options attributed to recording (such as CD sync, finalise, and erase), and input selector (to toggle between analogue, or the two choices of digital inputs). Also on the front panel is a headphone socket with independent volume control, and a sizeable display containing plenty of useful and decipherable information, including a two-channel, nine segment bar-graph to indicate volume (with a red colour to indicate clipping).

As per usual, it's the back panel that plays host to a healthy supply of

SPEC SHEET

Playback formats:	**CD, CD-DA, CD-RW(DA), CD-R(DA)**
Recording formats:	**CD-RW(DA), CD-R(DA)**
Inputs:	**2 x RCA analogue**
	1X RCA SPDIF-compatible
	1 x optical
Outputs:	**2 x RCA analogue**
	1 x RCA SPDIF-compatible
	1 x optical
	1 x 0.25" headphone socket

connectors: two pairs of RCA jacks for analogue inputs and outputs, and two pairs of digital inputs and outputs, configured as optical and RCA jacks (which for all but the optical connections, decent-quality cables are ready supplied).

In use

Recording a CD is as familiar a procedure as mastering to DAT, with the exception of a few important differences. Upon inserting a fresh CD, the CDR880 performs some description of audio calibration (to ensure optimum recording). This actually happens each time a new or 'non-finalised' CD-R(W) is re-inserted, up to a maximum of 96 times, whereupon the CDR880 insists that that's quite enough, and tells you it's about time you thought about finishing this recording.

When recording from an analogue source, there are two modes for recording: automatic and manual. The former will automatically increment the track number when it encounters a pause greater than three seconds, and will terminate recording completely after a 20-second gap. In manual mode it's possible to insert track markers at any point (but not less than four seconds apart), although the CDR880 will still move to the next track automatically if recording is paused or stopped.

Manual mode certainly affords more flexibility, as recordings of contiguous audio would not be portioned in automated mode (not with analogue sources anyway), but automatic can be as useful if you'd prefer to let the CDR880 get on with mastering an album's worth of material without you. Also, in manual mode, pauses of three seconds can be inserted in between tracks during recording by pressing the pause button again.

Perhaps one improvement that could be made to the analogue recording mode is an audio trigger that sets the CDR880 off recording when an input above a certain volume threshold is received. Otherwise, you're stuck trying to fine-tune your reaction times, zapping the play button on both source and destination devices simultaneously, to get the minimum of dead space at the beginning of the track. (To be fair though, there isn't any delay in the start of recording, once activated.)

The CDR880's record level is sufficiently broad enough to be able to take most input sources without the slightest suspicion of additional noise, and the level indicator on the display panel does an admirable job of letting you know when it's had too much. In actual fact, the CDR880 is very tolerable of short sections of audio that peak into 0 and over. Of course, this is entirely dependent on the source material itself; digital music lends itself nicely to digital mastering, whereas the CDR880 may not be as forgiving when recording acoustic sounds and instruments.

Using a digital source for recording is almost identical to analogue (except of course this is where SCMS rudely interrupts, and no record level has to be set), but with the addition of a CD-sync option. This facility forces the CDR880 to follow the track numbering of the source material (DAT, DCC, or MiniDisc), incrementing as it does, and also to trigger recording when playback is started at source. This mode can be applied to both individual track and entire recordings, all with little intervention from the user.

Interestingly, like multi-session drives on a computer, half-completed CDs can be returned to to add more tracks at a later date. Indeed, it's possible to completely remove the unfinished CD-R(W), insert a new one, then come back to the first, and pick up exactly where you left off.

However, until the disc is actually finalised, it won't play or be recognised by a standard CD player, although it will work in another CD recorder, which is useful. This is an excellent feature, as it allows you to review material already recorded, or take a few days or weeks to complete a project, without having to leave the device in record mode. Using a CD-RW disc can make this feature doubly useful, as it's then possible to delete the track just recorded, or indeed any number of sequentially positioned tracks before it, until none are left!

Finalising makes a disc ready for general consumption by any CD player, and usually takes about two minutes to complete (the display changes to keep you informed of the time remaining for the process). Once finalised, the music is etched into the CD-R forever; CD-RWs though, can be completely erased, and the whole process of compiling tracks begins again. It is worth noting however, that quite a high percentage of CD players and CD-ROM drives still available aren't compatible with CD-RWs, and are likely to spit them out at you. Non re-writeable discs work anywhere, though; from a computer's CD-ROM drive to grandpa's prototype wind-up CD player that's as old as time itself.

Verdict

Copy prevention is most definitely a contentious issue, and might just dissuade the very people the CDR880 is aimed at. But despite the fact that most folk are honest and would only use digital copying for their own material, the record industry is full (quite rightly) of paranoid so-and-sos, and there's always some execrable types who'll abuse their privileges (making numerous copies for more than just personal use), so maybe it's a necessary evil.

But it shouldn't put anyone off what is clearly a wonderful machine. As an analogue mastering device, it fits perfectly into a home studio set-up (moving aside the DAT or DCC machine with gusto), with its faultless, blindingly simple operation, and wealth of features. It's as robust as you'd expect of domestic hi-fi equipment, and even the fussiest of people should be pleased by its plush appearance.

What the CDR880 loses to a more professional CD mastering set-up (either using a computer-based set-up, or more expensive stand-alone model), it more than adequately compensates for in its ease of use and sense of making recording fun again. A giraffe could operate it, if it had thumbs, and any need for recording CDs. ™

More from: SRTL Limited, Record House, Emsworth, PO10 7NS Tel: 01243 379834 Fax: 01243 430639 email: info@srtl.co.uk Web:www.srtl.co.uk

PHILIPS CDR880

WHAT WE LIKE

- Simple and effective operation
- Choice of analogue and digital inputs
- Good support for CD-RWs

WHAT WE DON'T LIKE

- SCMS copy protection
- No input triggering with analogue recording

OVERALL

The CDR880 is a superb digital mastering device, with some very well though-out modes of operation, it's supremely simple to use, and offers a financially viable alternative to the potential headaches of computer-based CD mastering set-ups.

MARANTZ CDR630

COMPACT DISC RECORDER £749

Offering both a competitive price, and some features found on true 'pro' machines, the Marantz CDR630 looks like a great buy. *Paul Mac* looks for a catch

Marantz have historically traded on a reputable brand and higher prices, so the release of the CDR630, at £749 is a welcome surprise. Better still, they've stayed away from the fiddly, black hi-fi front panel that adorns even the higher priced competitors' products. It's sad, but true: if you want to get an engineer to run, dangle a big, tactile button just out of arms' reach. Good name, good buttons, good price... What's the catch?

Overview

Suspiciously, there doesn't seem to be one. The back panel has almost everything a decent studio would expect, from balanced XLR inputs to S/PDIF digital I/O on RCA and phono connections. The analogue alternatives are RCA in and out, but there is no balanced output. If you've got mastering in mind, this isn't a calamity, and those using it for sample archiving can use the digital I/O. The only curious design move is putting analogue input and level selection switches round the back of a racking unit; especially as they're so tiny. The mains connection is a two-pin figure-of-eight type.

The front of the CDR630 looks too simple to be true. As already mentioned, the buttons are large and clearly marked, with the important ones dipped in some mildly offensive colours. The transport controls lack a couple of obvious buttons: rewind and fast-forward – you'll have to dig out the remote control for this. Other than that, you can pretty much plug-in and play.

With a pre-recorded CD in the unit, you can use the machine just as you would an ordinary CD player; only the transport, display, and source select buttons have any effect. The display button cycles through four display modes, starting with track time passed, then track time remaining, total time remaining, and then back to time passed, but without the meters. If another CD goes in, the display defaults to the first display option, so you don't need to worry about someone else putting a CD in and finding a distinct lack of metering.

When you put a CD-R (recordable) or CD-RW (rewritable) into the CDR630, it first ➤

➤ decides which one you've given it and displays the result. After that, it's up to you. The input options are analogue (remember the select switch around the back), CXL SRC, CXL 44, OPT SRC, and OPT 44. The last four are the choices for digital input, and show a healthy respect for digital recording quality. That is, if your digital source is a good one, and keeps to the 44.1kHz straight and narrow, you use either OPT 44 (optical input), or CXL (coaxial input).

If your source is a bit naughty or deviant, or is at some other sample rate, then use either OPT SRC or CXL SRC. The SRC bit stands for 'sample rate conversion'. This is a real boon for studios that find themselves with all manner of digital recordings of dubious origin. If you're sure of your source, you can use a straight path to the CD; otherwise, the Marantz can pre-process it. This is probably the next best thing to word clock input.

There is only one decision to make when using an analogue source: automatic or manual track numbering. Automatic numbering writes a track number every time the input falls below 50dB for more than three seconds, and stops recording when it falls below 50dB for more than 20 seconds. With manual track numbering, the front panel Record button doubles as a track write button.

The manual also describes using the pause button to either enter record-pause mode or write a three-second silence at the beginning of a new track. The details aren't exactly clear until you actually try it. In fact, everything writes a new track number. You can't enter record-pause mode and continue writing the same track. Even if you use the pause button, the CDR630 increments the track number. The pause button writes the three second silence from record-pause mode, so you can do this after a stop and record-pause, or a record then pause. Either way, the track count is incremented before the silence is written.

The digital way

There are two distinct methods of recording from a digital source. Manual digital recording is similar to analogue recording – just select a source and off you go. The automatic and manual track numbering modes work the same as before.

Automatic digital recording is via the now-familiar CD-Sync mode, where subcodes from a digital source (CD, DAT, MD, DCC, and so on) determine record and numbering functions. There are two variations: Sync-1, and Sync.

Sync-1 records a single track. When the source is played, the CDR630 goes into record mode. If the source is started mid-track, recording begins when the next track starts. When it hits the next track start code, recording stops. The Sync mode is intended for recording more than one track from a source, such as a whole CD, except that you either have to press Stop to stop recording, or recording will stop after 20 seconds of 'silence.' Each new track increments the track count on the CD-R.

As is usual with CD recorders, the CDs they write will not play in an ordinary CD player until they're finalized (a process that writes the final table of contents and other information needed by the player). You cannot add any extra tracks to a finalized CD-R, and the entire contents of a finalized CD-RW must be deleted before rewriting. If you haven't finalised your CD-RW then you can erase just the last track and start recording from the end of the previous one.

The display on the CDR630 is recessed slightly behind the front panel. Unfortunately, this means that you can't see the whole display unless it's at close to eye level. When you can see it though, the contents are clear and bright.

The metering consists of a stereo 9-segment bargraph on the LCD. This is the only real drawback for anybody mastering through the analogue inputs. There are 0dB and Over LEDs, but these are not peak hold (except for the inherent 'ballistics'), so deciding whether your signal will overload the converters is a matter of keeping your eyes peeled.

In use

You can use the 630 in almost the same way you would a tape machine, albeit with one or two exceptions. Some people might find the inability to pause a recording and then continue writing the same track a bit of a pain. Once you start recording, you're committed to a single take of a single track, and unless you've forked out the extra dosh for a CD-RW, there's no going back.

On a positive note, there was no gap or click between tracks when tracks were incremented, either by stopping, pausing, or pressing record. There is a tiny delay between starting recording and writing actually taking place, though it isn't enough to mess up the CD-Sync start.

The only other niggles that came up during use have already been mentioned: the recessed display, the rear analogue input selector and level switches, and the lack of peak-hold or headroom read-out in the metering. On the other side, the Marantz is extremely easy to use, and the choice of cloning from an assumed 'safe' digital input and one that might need sample rate conversion is a real comfort. There's no SCMS to worry about, the sound quality is excellent, and so is the price.

Verdict

Consider what this all means for your mastering plans. The initial outlay for the unit is low, and the cost of media is low (CD-Rs start at about £1.20). CD players sit in every A&R man's office, in every club, and in every studio; you can't say that about DAT. For all of these reasons, the Marantz CDR630 is definitely the mastering machine of the moment. ™

More from: Marantz Professional
Tel: 01753 686080 Fax: 01753 686020
Web: www.marantz.com

SPEC SHEET

Playback formats:	CD, CD-R, CD-RW
Recording formats:	CD-R, CD-RW
PLAYBACK	
Frequency response:	20Hz to 20kHz, ±0.1dB
Channel unbalance:	<0.2dB
Outband attenuation:	>50dB above 30kHz
S/N:	105dB (A-weighted)
Dynamic range:	98dB
THD+N:	85dB
Channel separation:	93dB
RECORDING	
Frequency response:	20Hz to 20kHz, ±0.1dB
Channel unbalance:	<0.2dB
S/N:	90dB (A-weighted)
Dynamic range:	95dB
THD+N:	85dB
Channel separation:	93dB
Inputs/Outputs	
Analogue input RCA:	700mVrms, 50kΩ, 5Vrms max
Analogue input XLR-3:	+4dBu/-10dBu
Digital in S/PDIF (IEC95811) RCA:	32kHz to 48kHz, 75Ω
Digital in optical:	32 to 48kHz
Headphones output:	0 to 5Vrms, 8Ω to 2kΩ

MARANTZ CDR630

WHAT WE LIKE

- Optional sample rate conversion
- Easy to use
- Great price

WHAT WE DON'T LIKE

- Selector switches on back panel
- No peak-hold metering
- Display viewing angle

OVERALL

A good machine at an outstanding price. The best choice for low-cost mastering.

instrument solution

The new Focusrite Platinum ToneFactory™ brings you a rack-full of high performance Focusrite processing in one unit – giving your guitars, basses, synths and samplers a whole new dimension.

"The ToneFactory offers a wealth of genuinely useful features combining the classically smooth Focusrite EQ sound with new creative potential."
Paul White, SOS. June '98

ToneFactory™

Class A discrete Mic Pre
to get the most from your microphone....

Instrument Input
lets you plug straight into a racked up unit

Opto Compressor
gives you a punchy, fat sound

Noise Gate
removes noise introduced by the instrument or inserted device

Filters
high and low-pass – for creative and corrective mode, or use with the Gate

Tone Controller
emulates classic Valve preamps

Parametric EQ
for adding the finishing touches

Output Meter & Fader
to optimise output level

Go Platinum - with Focusrite.

£399
RRP

www.focusrite.com
email: sales@focusrite.com

Phone: +44 (0)1494 462246 Fax: +44 (0)1494 459920

Tell me more about the new Platinum Range from Focusrite...

Name:

Address

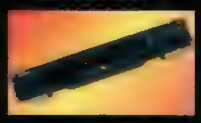
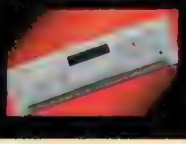
Post Code

Send to: Focusrite Audio Engineering Ltd. Lincoln Road, High Wycombe. HP12 3FX. England.

PLATINUM Focusrite™

™ VoiceMaster, Platinum & Focusrite are Trademarks of Focusrite Audio Engineering Ltd.

CD-R GROUP TEST

	PHILIPS CDR880	MARANTZ CDR630	HHB CDR-800	FOSTEX CD200
				
ANALOGUE I/O				
Phono (unbalanced) analogue in	✔	✔	✔	✔
Phono (unbalanced) analogue out	✔	✔	✔	✔
Balanced analogue in		✔	✔	✔
DIGITAL I/O				
S/PDIF coaxial I/O	✔	✔	✔	✔
S/PDIF optical I/O	✔	✔	✔	✔
AES/EBU input			✔	✔
RECORDING MEDIA				
CD-R		✔	✔	✔
CD-RW		✔		
CD-RDA (consumer)	✔			
CD-RWDA (consumer)	✔			
EXTRAS				
Sample rate conversion	✔	✔	✔	✔
SCMS defeat		✔	✔	✔
Infrared remote	✔	✔	✔	✔
PRICE:	£749	£360	£1,149	£1,522

MORE INFO:

PHILIPS CDR880: SRTL, Tel: 01243 379834 Fax: 01243 430639
MARANTZ CDR630: Marantz Professional, Tel: 01753 686080 Fax: 01753 686020
HHB CDR-800: HHB Communications, Tel: 0181 962 5000 Fax: 0181 962 5050
FOSTEX CD200: SCV London, Tel: 0171 923 1892 Fax: 0171 241 3644

Summary

From this comparison table, you can see that there are some huge price disparities. On the face of it, the HHB and Fostex machines seem to justify their cost with only the AES/EBU input, but that isn't the whole story. They both implement 'custom' settings, like auto-numbering thresholds, and fade-ins and outs. However, the HHB and Fostex machines also have a big price disparity between themselves, especially when you consider their strangely similar I/Os, facilities, mechanisms, and layouts.

Okay, so if you need the professional frills, then the HHB seems like a good choice; the cost of the Fostex will have to come down by quite a lot to compete. On the other hand, the Marantz has balanced inputs and the extra bonus of CD-RW compatibility. This machine definitely wins on 'value for money.'

The Philips CDR880 machine, and its new brother, the CDR765, have the lowest cost, but they also lack a few of the pro features, such as balanced input, SCMS defeat, and pro CD-R compatibility. Of course, the 'consumer' CD-RDA discs are falling in price (around £4 to £5 at last count) so if you can live with just the essentials, it has the price advantage. But if you want a real studio workhorse, opt for one of the true 'pro' machines here.™

LATE ENTRIES

Philips CDR765
News of the newest Philips machine came in just a little too late for inclusion in this round up, but we can reveal that the CDR765 has even more to offer for an amazing price. Not only do you get the CD-R machine, but you get a second CD player in the same box. This means you can copy CDs from one transport to the other at double speed. The CD-R specs are essentially the same as the CDR880, so you can now record your CDs, then clone them, all for £379.99.

Tascam CD-RW5000
Information is sketchy at the moment, but this new offering from Tascam may well sort the men from the boys. Amongst other things it will be compatible with all CD-R formats, and come in at around £1000. Something to look forward to.

Clone alone: Philips CDR765 (right) will make CD duplication easier than ever

xt20

Quality Matters

The Alesis ADAT XT20 20 Bit Digital Audio recorder offers a new standard in audio quality while remaining completely compatible with the huge foundation of over 110,000 ADATs in use worldwide. Using ADAT Type II, the only modular digital multitrack recording format that writes 20 bits to tape, the XT20 raises the standard of sonic excellence that ADAT recorders have established since their introduction in 1991. Rather than just a 25% increase, the jump from 16-bit to 20-bit recording provides audio quality that's sixteen times more detailed than the 16-bit sound of compact discs, resulting in a wider dynamic range and lower quantisation noise. This, coupled with the highest quality A-to-D and D-to-A convertors and the lack of any form of data compression gives unparalleled sonic quality.

LX20
20-BIT DIGITAL AUDIO RECORDER

M20
PROFESSIONAL 20-BIT DIGITAL AUDIO RECORDER

recording Alesis

ALESIS

When Sound Quality Matters

adat TYPE II

XT20: 24-bit 128x oversampling ΔΣ A/D converters and 20-bit 128x oversampling ΔΣ D/A converters (44.1 and 48kHz sampling rate operation), 24-bit ADAT Optical input capability, 20-bit data onto tape.

For a free brochure on the new ADAT Type II range please call **Sound Technology** on **01462 480000**
www.soundtech.co.uk

Sound Technology plc, Letchworth Point, Letchworth, Hertfordshire. SG6 1ND Fax: 01462 480800

EDITOR'S CHOICE

HOOTER SOUND B1

MIC AMP/COMPRESSOR/LIMITER/GATE £161

It's small, yellow, and is named after Pandora Peaks' finest assets – *Alan Branch* meets the price-busting B1 recording channel...

If you are of US origin, the name of this company may bring a little snigger to your lips. For those Brits who don't get the joke, think jugs, think bazookas, think melons, or any number of Americanisms referring to a part of the female anatomy we couldn't possibly mention here *(what, tits y'mean? – Ed)*. Apparently, Hooter's distributor in the US has encountered quite a few problems just due to the name!

The B1 is the first product to be released by Hooter Sound, and is manufactured, interestingly, by Fletcher ElectroAcoustics Limited, famous for their Joe Meek range of processors. Fletcher ElectoAcoustic has a great pedigree, their Joe Meek units being highly valued in many studios. Hooter Sound want to continue providing this type of quality, bringing it to the more budget conscious end of the market, from the bedroom beatmaster, to the small project studio.

The B1 is a mic pre-amp that includes a compressor/limiter and noise gate. The main reason you might choose external mic amps is to avoid the mic amps that are built into most desks, which are usually (but not always) lower quality, due to budget restrictions when wiring a large number of channels. In coming up with the B1, Hooter have certainly provided a low cost, high quality product. This is a recording channel, all-in-one type unit that can be bought direct from the factory for the bargain price of £161.

Overview

The B1 is relatively small at 180 x 143 x 48 mm and a nice shade of canary yellow. The front panel offers a phantom power LED, an input gain control, and ratio and release controls for the compressor/limiter, which has an independent compressing switch lighting up a green LED when switched in. The handy mute button flashes a red LED when switched in, above which is the main single peak overload LED next to a switched gate circuit. The gate has only one threshold control with the last control being an output gain. An LED array shows the output level with four colours: Green at -12dB, a yellow at -6dB, orange at +2dB, and a red at +8dB. The unit received for this review was a pre-production unit and ➤

SPEC SHEET

Input	
Mic input:	Balanced XLR
Mic impedance:	To suit 200Ω microphones
Phantom power:	48V
Mic gain:	0 to 70dB
Line/instrument input:	100KΩ, unbalanced
Line input gain:	-5 to +32dB variable (37dB gain swing)
Output	
Impedance:	Unbalanced 400Ω
Nominal output level:	0dB
Max level:	+10dB (limit)
Gate mute:	>90dB
Compression ratios:	1.3:1 up to 8:1
Compression release:	100mS to 1.4S

➤ was missing the input and output lettering on the front panel, which, we are assured, will be included when you buy it.

The rear of the unit has an XLR microphone input, phantom power switch, 1/4" jack socket for line instrument input, and two outputs, one monitor, one line, both on 1/4" jacks. Hooter have optimised the line input for direct recording of instruments like guitars and bass, with a input impedance of 470KΩ. Note however, when in use, the line input disables the mic input.

The mic pre-amp part of the B1 is a bit of a steal really. Although Hooter wouldn't openly admit it, a source did indicate that the circuits in the B1 have been 'borrowed' from the more expensive Joe Meek products, which considering the B1's price, is pretty amazing!

Dual outputs

The B1 has both a monitor output and line output because Hooter are aiming the unit at hard disk recording. This is an innovative and very impressive facility. With normal through monitoring of a computer there can often be an inherent delay, which can be very offputting for a vocalist or musician. The easiest way to overcome this is to monitor the source while recording into the computer, using two channels on the mixer, one from the source, and one from the computer, muting the one from the computer while recording and un-muting on playback. This is a common work-around for such problems, so the inclusion of 2 outputs makes wiring up much simpler, that is, a direct feed for the computer or multitrack, and one for monitoring.

The compressor is based on a VCA as opposed to the photocell type and includes automatic gain compensation to make up for gain lost to the compression process. This can easily be mistaken for an increase in noise when switched in. The compressor ratio is variable from 1.3:1 to 8:1 and has a clever peak limiter that prevents any overload. The threshold is fixed though, so you can only adjust it by changing the input gain. There is also no indication of the amount of compression, so shock, horror, you have to use your ears! When the compressor reaches maximum it automatically switches over to a 15:1 limiter, which is very handy with hard disc recording, especially when you have clip meters lighting up. It also includes a release control, which ranges from 100 milliseconds to 1.4 seconds.

The Hooter B1 is equipped with a switchable, fast acting, expander/gate section, complete red LED out front. With just one control it is very easy to use and works well. The gate opens and closes softly, and the threshold is variable.

In use

Tested with a few different mics and instruments, the B1 gave a clean, clear, crisp sound, and good quality. With a massive 60dB range under its bonnet, it is certainly powerful enough even for low impedance mics. With only two controls, the compressor section worked adequately across vocals and guitars, although there was an audible click upon switching it in. With a fairly gentle ratio of 2.5:1 and a relatively slow release the B1 worked well with vocals and gave a nice fatness to the sound.

With the compression wound up a bit stronger, at 4:1, and with a faster release, fast guitar picking and bass felt the benefit, with the compressor recovering quickly yet still adding a noticeable thickening to the sound. When the compressor was driven a lot harder, it occasionally switched over to the limiter mode and the transition was very smooth. This gave the impression that it likes to be driven quite hard, but without completely squashing the signal. The noise gate inclusion works very well, even with just a switch, an LED, and a simple one-pot threshold control. It is like a loose expander gate for cleaning up any unwanted noise incurred by heavy compression and high gain settings.

Verdict

For £161, this unit is a bit of a bargain – whether or not you like the colour. With its Fletcher ElectroAcoustics background, the mic amp is of the high quality you would expect. While it wasn't as quiet during the review as other mic amps, the B1 is still exceptional value, especially with the compressor and noise gate, and the inclusion of two separate outputs. As an all-in-one type of unit, the B1 does the job well, which makes this is an ideal mic amp for people on a budget. At such a titillating price, you can't afford to be without your Hooters! ™

More from: Hooter Sound, Quay House, Quay Road, Newton Abbot, Devon TQ12 2BU Tel: 01626 333948 Fax: 01626 333157 email: sales@hootersound.com

HOOTER SOUND B1

WHAT WE LIKE

- Monitor output
- Compact Size
- Price! Price! Price!

WHAT WE DON'T LIKE

- No threshold control on compressor

OVERALL

Outstanding first product from Hooter – keep 'em coming.

Extra monitor output is great for hard disk recording

CAUTION Removal of cover may expose dangerous voltages
No user serviceable parts inside
service strictly by qualified personnel only
HOOTER SOUND Ltd. Mic Amp Compressor Limiter Gate
Manufactured in England by
Fletcher Electroacoustics Ltd
Power 12V AC
LINE OUTPUT
MONITOR OUTPUT
LINE/ INSTRUMENT
PHANTOM POWER
Only use power supply provided
№ 102029

Soundscape™
DIGITAL TECHNOLOGY

mixtreme™

Digital Mixing, Real-Time Effects, 16 Inputs & outputs, any questions!

Designed for Microsoft Windows NT Windows'95

UNBEATABLE £449.00

There are many companies in the market place offering multi-channel audio PCI cards, but for most, this is where it ends. Most companies can at best just 'put chips on boards', but from Soundscape Digital Technology there is an unbeatable combination of software and hardware... **mixtreme.**

The **mixtreme** PCI card has a completely different concept, as not only does it provide 16 channels of 24 bit digital I/O via two industry standard 8 channel TDIF (Tascam Digital Interface) ports, but it also has 24 bit custom digital mixing and real-time DSP effects plug-ins from some of the worlds' leading audio companies. **mixtreme** performs like you expect, without the annoying in/out delays that make native mixing and effects impossible to use in real time.

You can connect two Soundscape SS8IO-3 8-Channel TDIF to Analogue interfaces to **mixtreme**, for a full 16 channels of 20 bit analogue input and output, or you can connect the TDIF directly to a digital console or Tascam DA-88.

For ADAT users, there is the SS8IO-2 TDIF to ADAT converter, and you can connect two of these, or combine one ADAT and one Analogue interface. Optional SPDIF completes the range of Digital Connections available.

With standard Multimedia drivers for Windows 95 and Windows NT, plus VST compatible ASIO drivers, **mixtreme** can be used with most PC based MIDI/Audio sequencers or PC based recording/editing software.

SS8IO-3 Interface

- 8 channel TDIF to unbalanced analogue I/O (cinch/RCA connectors)
- 20 bit AD/DA Converters
- Wordclock/Superclock in/out

SS8IO-3 £449.00

SS8IO-2 Interface

- 8 channel TDIF to ADAT 'lightpipe' conversion in both directions (simultaneously)
- Wordclock/Superclock in/out

SS8IO-2 £449.00

TDIF

adat

Soundscape Version 2.0

AUDIO TOOLBOX

APHEX

TC WORKS

emagic Logic AUDIO

Wave Mechanics

CAKEWALK MUSIC SOFTWARE

Soundscape™
Digital TeChnology

Tel: +44 1222 450120 Fax: +44 1222 450130
email:sales@soundscape-digital.com
http://www.soundscape-digital.com

COPYRIGHT 1993 TO 1998 BY SOUNDSCAPE DIGITAL TECHNOLOGY LTD. ALL RIGHTS RESERVED. SOUNDSCAPE & MIXTREME ARE REGISTERED TRADE MARKS OF SOUNDSCAPE DIGITAL TECHNOLOGY LTD. ANY OTHER TRADE MARKS MENTIONED ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS

LINE 6 AMP FARM

From the experts in guitar amp simulation comes a plug-in for the rock'n'roll in everybody. Old *Paul Mac* has an Amp Farm...

GUITAR AMP SIMULATION PLUG-IN £469

If you could have an ultimate wish-list for your studio, we'll bet you would include all the classic guitar amps, so that whatever the guitar hero wants, the guitar hero gets. Of course, you'd have to add some storage space, and accept that most of the amps would spend most of their time in disuse. In the real world this is not an option for most people, and amp simulators like the Amp farm are a real alternative.

Line 6 are the company who offer such an alternative. Up until now they've been selling hardware processors and 'Tube Tone Digital Guitar Amplifier Systems'. As the literature says, "the words 'combo amplifier' don't even come close." Well actually they do, it's just that the top bit is rather more sophisticated than your typical rock'n'roll set-up. All of these products are based on Line 6's TubeTone technology, which is based around a stack of research into what makes guitar amps sound the way they do. That, and methods of implementing it in software with the help of a bit of DSP.

It has to be said, Line 6 have done a good job and currently enjoy the favour of even the most die-hard retro fanatics. They don't pretend that they *are* the real thing, they just claim to sound *like* it; hence their bold three-worder: "Because software can." Now *that's* rock'n'roll...

Overview

Line 6's Amp Farm is the plug-in incarnation of TubeTone technology. It's a ProTools TDM plug-in that simulates the biggest names in guitar cabs and heads. Guitar amp simulation is nothing new, but actually naming the amps you're simulating is. Rather than providing just a generic screen with overdrive, EQ, and a volume control that goes up to 11, whatever amp you choose comes up onscreen, with the

Hear the Amp Farm in (noisy) action on the cover CD

onscreen, with the right controls and the right look.

The plug-in is for the ProTools TDM environment, a system built around the ProTools audio recording and editing software, and DSP (digital signal processing) hardware that slots into your Mac. It will only work on PCI based computers, not the older NuBus system that Macs originally had. This is a bit of a shame, but there's probably good 'power' reasons for it, presumably because only the PCI hardware has the capacity to cope.

As far as copy protect goes, you get a single hard disk install with the package, and another one once you've registered the software. This is no big hassle and is always in the interests of the user. Some people object to software installs, but as long as people insist on pirating software, you'd have to say that this is fair enough.

Installation is straightforward, but you should look out for the demo session as this takes up a lot of space and is installed by default. Avoiding this is simply a matter of doing a 'custom' install and de-selecting the demo option. However, it is probably worth a look, even with its all-American commentary.

You could use Amp Farm as other plug-ins by just slotting it into the guitar track insert and working from there. However, Line 6 sensibly suggest that you set up an auxiliary channel and feed it with the original. With Amp Farm in the auxiliary track insert you can leave the original guitar part alone, without having to bounce down, re-introduce the processed track and bypass the plug-in for playback. Of course, if you're running out of DSP power then you'll have to do this anyway. A single Amp Farm insert takes up a whole DSP chip, so if you're not a wealthy power user, you'll have to take care.

Once Amp Farm is in your auxiliary channel, or whatever channel you see fit to use, you are presented with an opening screen of the Factory Default – a 1959 Fender Bassman amp with a 4 x 10 Bassman cabinet. Yes, we're in guitar heaven already.

Operation couldn't be simpler.

PICK AN AMP, ANY AMP...

Line 6's Amp Farm simulates seven different 'classic' guitar amps. Below is a description of each one...

1959 Fender Bassman
A 4x10 combo amp that found a place in the heart of many R'n'B guitar players, even though it was originally intended for bass players.

1964 Fender 'Blackface' Deluxe
The amp of choice for blues and country players. Line 6 paid special attention to the changes in tone control response as a result of changing the valve drive. As they say: "Tweaked right up, this tone will cut through and sing."

It looks like an AC30, it sounds like an AC30...

1965 Fender 'Blackface' Twin
A versatile amp without the extreme overdrive of some other models, but with the surf-dude tremolo. Line 6 say: "Turn up the tremolo, turn up your monitors, and look out for bikinis."

1965 Vox AC30
The great British amp. Line 6's simulation is based on an amp bought from a Los Angeles rental company, just after a stint with Lenny Kravitz.

1964 Marshall JTM 45
For amp anoraks, this amp had the Marshall 'block' logo and not the scrolled one. Its gold Plexiglas front panel became the name for the next amp in the list. This is one of the first Marshall 'crunch' amps.

1968 Marshall Plexi
Where would rock guitar be without Marshall? This classic model used the EL34 valve at the centre of its distinctive sound. Everyone from Hendrix to Van Halen used this box of rox.

1990 Marshall JCM 800
Basically, an updated Plexi where the tone controls come after the valves in the signal chain. This is the 'reference' Marshall, used by metal maestros everywhere.

Underneath the standard TDM plug-in controls (routing, automation, and compare/bypass) is a graphic of the selected Amplifier. Line 6 have gone to great lengths to make these amps look right, so for the Bassman you get that orange back-plate with '50s ham radio-style knobs. The controls are restricted to what was on the original, so no hybrid patching is allowed, but that would defeat the object of this plug-in anyway. Underneath this section are the general Amp Farm bits and pieces, including a symbolic grill shrouding three valves that glow more brightly as you drive them harder (well okay, as you drive that particular set of DSP instructions with a higher set of numbers).

There are two pop-up menus here. One selects the amp type, and one selects the cab type. Every amp is labelled with a year and a model, and the cabinet descriptions are the usual number and size of drivers, complete with a manufacturer or model.

A vintage Marshall, complete with moving patch cord

Choose your weapon

There are no less than eight different amp heads in Amp Farm, and 22 choices of speaker cabinet (23 if you count 'none'). Actually, there are less cabinet models, but each one is simulated with off-axis or near microphone placement, or combination of these. That is how thorough Line 6 have been in their analysis and simulation. Each one sounds different, each one sounds right. See the 'Amp bank' box for the different models.

For example, the factory preset JTM-45 '65 Crunch is a combination of a Marshall JTM-45 amp head and a 2 x 12 twin cabinet. The preset Deluxe Blackface Driven is a combination of the 1964 Fender 'Blackface' Deluxe with an off-axis mic pointed at a directly-named 'Big Cab,' which is a generic large cabinet created by Line 6 themselves. The settings are already in place for that particular preset, ready for you to tweak.

The only things that needed a bit of trickery in the transfer to a computer screen are the patchbay connections that some of the old amps had for selecting an overall character. In Amp Farm, you click on a switch, and the patchcord graphic

HHB CIRCLE 5

SPEC SHEET

Minimum system

Hardware: ProTools TDM-equipped PCI PowerPC, ProTools III/24 hardware

Software: ProTools 3.2 or higher, 4.x recommended

Compatible software: Any TDM-compatible audio software, such as Emagic Logic TDM, MOTU Digital performer, Opcode Studio Vision Pro, or Steinberg Cubase Audio/ VST

DSP usage: 1 chip per insert

Amp models simulated: 1959 Fender Bassman, 1964 Fender 'Blackface' Deluxe, 1965 Fender 'Blackface' Twin, 1965 Vox AC30, 1964 Marshall JTM 45, 1968 Marshall Plexi, 1990 Marshall JCM800

Additional features: noise gate, master volume control, analogue clipping simulation, full ProTools automation compatibility

own noise gate. You couldn't give an amp simulator to a ProTools user without one. If you have any sense of the genuine though, you won't use it just to cut out the authentic gain hiss or the hung harmonics, however tempting it might be in the region-driven world of hard disk editing. You could use it to add to the effects though, and we'll forgive that. In any case, it's a simple affair, with only a threshold and release control to its name.

The final (very neat) feature in Amp Farm is the clip function. You can clip the input (indicated with a clip LED) and the plug-in will simulate the actual clipping of the amp in question. Of course, the usual digital limits still apply, but as far as possible, Amp Farm will simulate analogue clipping for those who need a little extra.

In use

When you first plug a guitar through this plug-in, all you want to do is play. Forget about the project you have in hand, forget about posting your winning lottery ticket, and forget about sleep. This plug-in is like having 20 new toys all at once.

Scan through the hardware you wish you had, without stacking cabinets, or blowing valves or even explaining to the neighbours that their wall cavities are resonating because you're trying to drive the input stage a little harder. Yes, you can get quite carried away.

But that's because the Amp Farm is doing its job exceptionally well. Every harmonic nuance that should be there is there. Stick the drive up to ten and hear those harmonics sing; reduce a Bassman head to a warm crispness and select the right cabinet to set it off into the stuff that R'n'B dreams are made of. The tone controls work like those big chunky things that stuffy engineers would say "well, it's a little difficult to make precise adjustments" of. Bugger that; you can wang it up and down until it sounds a bit like Hendrix.

Then you have to remember that you're in the ProTools environment and, wait a minute, we can automate these controls. Now you can go where guitarists can't, put a whole different perspective on solos by creating crescendos of drive or tremolo, or move the tone of a rhythm guitar part to emphasise the big picture.

For just experimenting with a guitar in hand, it would be nice to have keyboard controls for the knobs and buttons in Amp Farm. It takes a moment to orientate yourself with a mouse, so you do lose the immediacy that comes with controlling the hardware equivalent. Even just tabbing through the controls and using the arrow keys to adjust would make the experience more tactile. Moving circular controls with vertical or horizontal mouse movements just doesn't feel right somehow.

Verdict

Not all ProTools users are obvious candidates for Amp Farm's talents. The stereotypical dance production studio may not see the need to invest in such a specialist product, as there other ways of getting close to its sounds, for less money. However, once you've spent only a few minutes with Amp Farm, you'll begin to realise why it is destined to become a classic TDM plug-in. The sounds are so detailed, from the variety of overdrive flavours to the results of that overdrive, such as ringing harmonics and tone mutation, and on to the realistic way it reacts to the dynamics of the source. It's official. Software *can* do it. TM

More from: Digidesign UK
Tel: 01753 653322 Fax: 01753 654999
Web (Line 6): www.line6.com
Web (Digidesign): www.digidesign.com

DIGITAL VILLAGE
Barnet Tel: 0181 440 3440

DIGITAL VILLAGE
Croydon Tel: 0181 407 8444

DIGITAL VILLAGE
London W3 Tel: 0181 992 5592

EDDIE MOORS MUSIC
Bournemouth Tel: 01202 395135

GIGSOUND
London SW16 Tel: 0181 769 5681

THE GUITAR & AMP CENTRE
Brighton Tel: 01273 676835

THE M CORPORATION
Nottingham Tel: 0115 9474070

THE M CORPORATION
Ringwood, Hampshire Tel: 01425 470007

MUSIC VILLAGE
Romford Tel: 0181 598 9955

MUSIC VILLAGE
Cambridge Tel: 01223 324536

Q MUSIC
Birmingham Tel: 0121 643 4655

SAPPHIRES
London NW2 Tel: 0181 450 0318

SOUND DIVISION
London N1 Tel: 0171 609 3999

SOUNDS LIVE
Newcastle Tel: 0191 230 3422

SOUND SOLUTIONS
Southwater, Sussex Tel: 01403 732606

ROSE MORRIS
London WC2 Tel: 0171 836 9741

TURNKEY
London WC2 Tel: 0171 379 5655

WAY OUT WEST
Twickenham Tel: 0181 744 1040

HHB

HHB Communications Limited
73-75 Scrubs Lane · London NW10 6QU · UK
Tel: 0181 962 5000 Fax: 0181 962 5050 E-Mail: sales@hhb.co.uk
Visit HHB on line at http://www.hhb.co.uk

ACCURATE MONITORING IS NOW A RIGHT, NOT A PRIVILEGE.

Accurate monitoring used to be expensive. Not any more. Available in both active and passive versions, the new HHB Circle 5 incorporates a number of unique breakthroughs in loudspeaker technology to create a compact, high performance studio monitor that's ideal for use in a wide range of professional applications. An investment of £150,000 in research and development has produced a loudspeaker of exceptional clarity, with a sound that doesn't fatigue the listener, even after a long session.

So if you're looking for a great sounding studio monitor, listen to the Circle 5 at your nearest HHB dealer and prepare to be impressed. Then ask the price and prepare to be amazed.

HHB CIRCLE 5

- Varied cone thickness minimises low frequency distortion
- Low Q filters deliver an untiring sound during long listening sessions
- Detailed and accurate on and off axis sound
- 120W LF / 70W HF integral amplifier pack (active version)
- Delivers 'large monitor' performance from a compact loudspeaker
- Individually tested and matched ferro-fluid cooled soft dome tweeters
- Magnetically shielded for use near computer and video monitors
- Solid State Polyswitch® tweeter overload protection

HHB Communications Ltd · 73-75 Scrubs Lane, London NW10 6QU, UK
Tel: 0181 962 5000 · Fax: 0181 962 5050 · E-Mail: sales@hhb.co.uk
HHB Communications USA LLC · 626 Santa Monica Boulevard, Suite 110, Santa Monica, CA 90401, USA
Tel: 310 319 1111 · Fax: 310 319 1311 · E-Mail: sales@hhbusa.com
HHB Communications Canada Ltd · 260 King Street East, Toronto, Ontario M5A 4L5, Canada
Tel: 416 867 9000 · Fax: 416 867 1080 · E-Mail: sales@hhbcanada.com

British sound at its best

http://www.hhb.co.uk

HHB DISTRIBUTION

SONY DPS-V55M

MULTI-EFFECTS PROCESSOR £464

Could it be time for Sony effects processors to raise their profile? *Trevor Curwen* has a fiddle with the DPS-V55M, and finds the answer

The DPS-V55M is put to work with snare, piano, and guitar on this month's cover CD

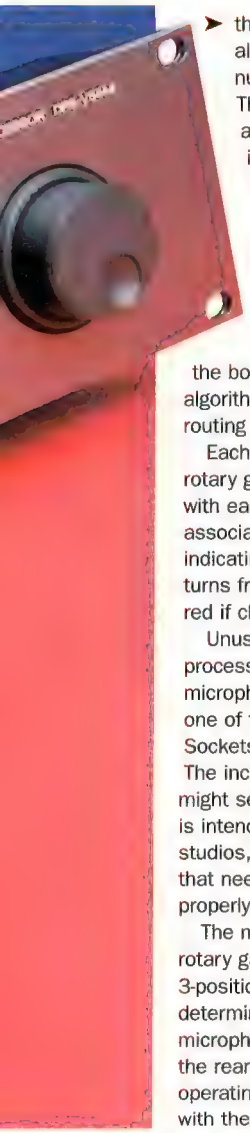
Sony's Broadcast and Professional division have marketed a small range of effects processors in recent years. These usually receive very favourable reviews, though perhaps haven't captured the buyer's imagination in the same way as Lexicon or TC Electronic units have. The Sony effects processor range now consists of two models, the £1,320 DPS V77, reviewed in the July 1997 edition of *The Mix*, and the new DPS-V55M, which at £464, is a more affordable alternative.

Overview

The DPS-V55M sports 200 preset programs, along with another 200 memory locations, generously provided to store your own edits. These programs were apparently created by musicians and engineers from around the world, although Sony are not saying who (come on now, own up, who was it?). Some are quite unusual in that they are tuned for use with 4-channel surround sound.

The DPS-V55M is a 2U sized unit finished in a totally unflashy neutral grey. Mains power comes in on a captive lead fitted with one of those horrible two-pronged moulded plugs. Inputs and outputs (four of each, in stereo pairs), are on unbalanced jacks, and switches select either the -10 and +4 operating levels independently. Two MIDI sockets, an In and an Out/Thru, also reside on the back panel, as does a contrast knob for the front panel LCD, which is a nice touch, even though it doesn't do an awful lot.

The front panel of the unit is very well laid-out: neat, uncluttered, and easy to use. A list of all the 45 available effect algorithms takes up a lot of the space, but is extremely useful as it saves looking in



➤ the manual to see what algorithms go with the numbers displayed in the LCD. The 2-line LCD is perfectly adequate, giving a clear indication of what's happening onboard and having none of the graphic depictions that made the V77 display look cheesy. In normal mode the top line shows the program number and name, whilst the bottom line shows what algorithms are active, and their routing if relevant.

Each rear panel input has its own rotary gain knob on the front panel, with each knob having an associated triple-colour LED indicating signal strength, which turns from green, through orange, to red if clipping is occurring.

Unusually for a multi-effects processor, there is a front panel microphone input, which is actually one of those Neutrik Combination Sockets that can take XLR or Jack. The inclusion of a microphone input might seem strange, but as the unit is intended for both musicians and studios, and has a vocoder algorithm that needs a mic input to work properly, it's easy to see the point.

The microphone input has its own rotary gain knob, and there's a 3-position switch that effectively determines what input the microphone is routed to, by muting the rear panel inputs. The normal operating mode for the unit would be with the switch set to rear, which means the unit takes input from rear jack inputs only. Setting the switch to CH1+2 mutes rear input one, and routes the mic input to that channel, while another sound can be fed into channel two through the rear jack socket, as would be the case in vocoder mode.

The rest of the front panel is ergonomically sound with a pair of arrow buttons to scroll through parameters for editing, and a large rotary dial for selecting programs and for tweaking parameters when in edit mode. The rotary dial works really well in that it's responsive to your 'spin speed' so you can quickly get from program 1 to program 400 in four quick spins. Six more buttons next to the rotary dial take care of the rest of the unit's functions, including system set-up, bypass, and saving programs.

Algorithms and programs

There are 45 different effects algorithms in this unit, each residing in one of three basic categories. The first nine algorithms are 4-channel effects blocks, and these are the highest quality effects, including Plate, Hall, and Room Reverbs, 3-Dimensional Effects, Deca chorus, Ensemble, Rotary speaker, Vocoder and Doppler. The bulk of the rest of the algorithms (27 in total) are 2-channel effects blocks. These are basically stereo effects and most areas are covered including reverb, delay, chorus, flanging, phasing, panning, and tremolo, to mention just a few. Compression and speaker simulation are also covered.

The remaining nine algorithms are known as the mono-pair blocks, and these each include two of the basic effects types, such as reverb and delay, or chorus and pitch-shifting.

Programs can contain up to two effects blocks, designated FXA and FXB. With the two channel and mono-pair effects blocks, each program can contain two effects blocks configured as either two 2-channel effects, two mono pair effects, or one of each. When a 4-channel effect is used, because of the amount of processing power needed, the program can only contain that one effect; designated as FXA.

In the programs with two FX blocks, there are two routing combinations: Parallel, where FXA and FXB are completely independent, or series, where the sound from FXA feeds into the FXB block for further processing.

Editing

Editing of any of the programs in the DPS-V55M is extremely straightforward. You simply push either of the edit parameter buttons (the ones marked with arrows) to get into edit mode and scroll through the parameters with the right-hand button. The name of the selcted parameter then appears on the bottom row of the display, and the parameter's value flashes. You then adjust this using the rotary dial. The parameter list does not wrap around, so you have to scroll back with the left-hand arrow button to get back through the list, but hitting the exit button takes you back to the main screen at any point in the editing process.

In a program where there are two FX blocks, the first parameter to come up is the on/off switching for FXA, then the on/off for FXB, followed by the list of parameters for FXA, and then those for FXB. This seems like a logical way to do things as one FX block could be initially quickly turned off to monitor changes being made to the other more easily.

There are not a vast amount of parameters available for tweaking: up to eight per FX block including on/off and control over the wet and direct sounds, with no hidden or deeper levels to get into. This makes editing very simple but perhaps not as comprehensive as some would like. However, the parameters available have been chosen well, being the ones most crucial and most often adjusted. For example, the reverb parameters are reverb time, pre-delay, size, spread, and high frequency damping.

Putting the options for editing the wet/dry mix (which takes the form of either a ratio or separate direct and effect level parameters) deep in the edit menu is not a good idea for a studio effects processor that is mainly used on an auxiliary send, and where 100% wet signal with no direct sound is required for mixing. A global wet/dry control

SPEC SHEET

Frequency response:	20Hz to 22kHz (+0dB/-1dB)
Signal-to-noise ratio:	>93dB
Distortion:	<0.0005% (1kHz)
Dimensions:	482 X 88 X 290mm
Weight:	3.6kg
A/D converter:	20-bit resolution
D/A converter:	20-bit resolution
Sampling frequency:	48kHz

Each rear-panel input has its own rotary gain knob on the front panel

Quality FX at a reasonable price

accessible from the front panel is often a more useful and quicker option in these circumstances. Having said that, some of these programs are designed to work on insert points where they would need some direct sound, and Sony make this clear in their program list, which designates each program as either SR (send and return) or IL (in-line). Also, the programs in this unit that warrant it already have their dry sound set to zero as opposed to only 24 out of the 198 in the V77 (Sony have been listening, then!)

Getting back to the editing process, should you want to change an algorithm in a program, which would be the case when writing a program from scratch, simply press the FX type button. The loaded algorithm number flashes and can be changed with the rotary dial. This FX type button has a dial function. In search mode you can use it to select one of the 45 algorithms and then use the rotary knob to scroll through all the programs that utilise that particular algorithm.

Saving programs is also easy, implemented with a couple of button pushes and a scroll of the dial, though there is no facility to rename programs; you are simply stuck with the name of the original program in a new location, instead of the memory full of obscene names that most engineers end up with.

The DPS-V55M comes with three A4-sized manuals: a basic instruction manual, an effect parameter manual (describes each algorithm in detail and lists all its editable parameters), and a present memory catalogue, which is seven pages of all the factory installed programs, their algorithms, configurations, suggested uses, and descriptive comments – a real help when choosing programs for particular results.

In use

Overall the programs cover a wide range of applications. There are many different reverb programs covering a lot of plate reverb sounds and different-sized ambient spaces. The quality of the reverbs is very good, with enough variation between programs that you might never need to enter the edit page.

The 4-channel reverb effects are of a higher quality than the 2-channel ones, but that's not to say those are in any way weak – far from it, they do a fine job. The advantage of using the 2-channel effects is that you can set the unit up as two completely separate stereo processors giving, for example, two separate stereo reverbs or a stereo reverb and a stereo delay. Sony call this split mode and surprisingly only have 11 of these in the 200 preset programs. However, it's easy enough to program new ones in, and anyone wanting to use the unit's two separate stereo processors could soon fill all 200 user locations with new split programs. Most of the other programs are set up for a stereo input to give four outputs for a 4-speaker (front and back) surround sound system if needed, but these also work in stereo, and quality stereo effects can be had from both mono and stereo inputs.

The 200 preset programs cover a lot of bases, from specific applications like a telephone voice simulator, to the just plain daft, which any sane person would be hard-pressed to find a musical use for. Still, no doubt someone will; one man's fish is another man's *poisson*, as they say in France.

Overall the effect quality is excellent, the rotary speaker simulations are realistic (speed change at the touch of a button), some of the automatic programs are great for funky guitar, and there are plenty of those wishy-washy ambient treatments, one of which makes guitar sound so much like whale-song that subsequent Greenpeace membership is inevitable.

Other notable oddities are program 120 Easternizer, which uses pitch-shifting and vibrato to make whatever you play into it sound like the background music in your local curry house, and the Doppler effect programs give the best simulation yet of a fire engine passing with its siren going. Audition this unit on stereo headphones and you will be mightily impressed.

MIDI

MIDI is not exactly well-specified in this unit, which seems to be a missed opportunity when so many other manufacturers are using MIDI control to change several parameters and hence automate the effects in real time. The DPS-V55M's sole concession to this is MIDI control of the tap function. Normally a front panel tap button can be used to set delay times or trigger other effects. This can be done with MIDI, although it is only given a cursory footnote in the manual. Data above 40H received as a control change 04H produces the same effect as pressing ENTER (TAP) button on the front panel. The other MIDI functions are recall of programs with program change messages, a program table allowing mapping of program change numbers to particular programs, and bulk transfer of program data for storage.

Verdict

£464 is a very reasonable price to pay for an effects processor of this quality. There are other FX units available at budget prices: the Lexicon MPX1 immediately springs to mind, and is a lot cheaper at £249. However, the Lexicon is a stereo in, stereo out unit, whereas the Sony can be configured as two stereo units, which must count for a lot in comparison.

The number and variation of onboard programs that come with the DPS-V55M means that there is something here for everybody, and for anyone working in surround sound those programs are a real bonus. In fact, this may be the only unit with such effects in this price bracket. It's about time Sony's effects processors were heard by more people. TM

More from: Sony Broadcast and Professional UK, Brooklands, Weybridge, Surrey, KT 13 OXW Tel: 01932 816000 Fax: 01932 817013

SONY DPS-V55M

WHAT WE LIKE

- Excellent quality effects
- Surround sound programs a bonus
- Simple editing procedure

WHAT WE DON'T LIKE

- Captive lead with 2-pin plug
- MIDI functions are very basic

OVERALL

A quality effects processor, reasonably-priced, and capable of some interesting and unusual effects.

The world's most respected live performers

the Shure Beta range

Just what is it that makes Shure Beta microphones the world's most respected for live performance? Ask a professional artist, and you'll hear about Beta's remarkable sound quality from both vocalists and instrumentalists. While an engineer will talk about their tight, uniform supercardioid pickup patterns and how Beta's technical precision turns every live performance into a studio-quality sound experience.

If you're miking an entire stage, you'll want the full Shure Beta Line. It includes the improved Beta 57A and 58A with smoother response and lower handling noise. The premier Beta 87A brings accuracy and detail to vocals. And to drive it all home, complete your stage with the exciting Beta 52 for your kick drum and the unique Beta 56 for drums and other instruments.

It wasn't easy improving upon the Shure Beta range, but once you audition these new microphones you'll agree it was well worth it.

Shure endorsed artist Sheryl Crow.

SHURE®

FOR THE FULL STORY ON SHURE BETA MICROPHONES AND INFORMATION ON OTHER QUALITY PRO AUDIO EQUIPMENT FROM HW INTERNATIONAL, CALL OUR FREEPHONE TODAY!

HW International,
167-171 Willoughby Lane,
London N17 0SB

FREEPHONE TO RECEIVE OUR PRO AUDIO CATALOGUE NOW!

0800 7311990

EMAGIC UNITOR 8

SYNC/MIDI INTERFACE FOR MAC/PC £575

Emagic have taken care of the audio bit with their AudioWerk8 card, now it's time for MIDI. *Bob Dormon* checks out the Unitor8...

Let's have a moment of silence for the Atari please, ladies and gentlemen, without which many of the most alluring software products available today, would simply not exist.

Indeed, the Atari spurred many with designs on sequencing software to move into the world of MIDI hardware. It was more a matter of necessity than whim. Steinberg brought out MIDEX, and before that the SMP-24 to bring multiport MIDI interfacing to the European masses who had yet to wake up to the Mac. The PC was still asleep no matter where you were on the globe back then. Popular sequencing rival C-Lab (the sequencing brains of which later became Emagic) kicked off with the XPort and followed it up with the Unitor, providing slick SMPTE sync for both C-Lab programs and Steinberg's too.

When these two heavyweights in the Atari world looked beyond their Teutonic skies and discovered America, the need to produce Mac versions brought with it a few established standards that as new kids on the block, they had to abide by. Initially, their sequencers fell into line with the popular Mac interfaces across the pond, but having been there a while now, these new kids are looking pretty streetwise. But who's got the flashiest trainers among these tourists today then? Well when it comes to software, the jury's still out, but it's fair to say that Steinberg's Cubase VST did a lot of the running early on.

Glance at the hardware proffered by our European partners and it's clear that Emagic are very keen to make an impression, entering the digital audio interface domain with the AudioWerk8, a highly desirable multi-output PCI card hampered by an early decision to limit its compatibility to Emagic software only. The writing's on the wall that such a judgment is destined to be overturned. If recent decisions are anything to go by, then it seems that Emagic have finally woken up and smelt the coffee, and are looking beyond supporting their own software.

The Unitor8 is a perfect example of this – although it does integrate with their software with ease, it doesn't do a bad job of making friends with its sequencing software enemies either. This eight port, 128-channel MIDI interface and SMPTE synchronizer will talk to Macs and PCs too, so everybody's happy... Unless you've got an Atari, of course.

Overview

The general appearance of multi-port MIDI interfaces these days is much of a muchness, apart from later models in MOTU's MTP series, which feature LCD read-outs for using independently of a computer. The original MTP and examples from Opcode appear to be the Unitor8's role model. However, cosmetics aside there are some obvious differences, which the back panel reveals.

From left to right the Unitor8 sports an external power supply socket and the two Mini DIN8 (RS-422) sockets for serial interfacing with the Macintosh. The Mac Thru corresponds to a switch bearing the same name on the front panel. Push this in and the communication with the Mac (from the adjacent serial port) is fed directly to the Mac Thru socket, effectively bypassing the Unitor8. As the Mac uses its serial ports for an extensive array of peripherals including printers, this function enables other gear to be chained up to the Unitor8 without the fuss of unplugging it or turning it on.

The Thru port has a secondary function when the front panel switch is not in use, and that is to allow you to daisychain up to eight Unitor8s together providing 1,024 MIDI channels per serial port. Networking MIDI interfaces in this way has been common practice for quite some time, yet the Unitor8 appears to have the edge as it can link eight rather than the usual four from one serial port. Windows users access the Unitor8 with a 9-pin D-type (RS-232) connector, yet linking subsequent Unitor8s requires the use of these units' serial ports.

Two 1/4" jacks ferry LTC in and out of the unit, and two Mini DIN4 sockets make a surprising appearance on the Unitor8 as they deal with the esoteric world of VITC – vertical interval timecode, the type found in professional video environments. Unfortunately, there are no leads supplied to deal with this facility, yet there is a wiring diagram. If you like the smell of molten plastic then go ahead and try soldering one of these fiendishly small connectors, otherwise buy a cable. The VITC sockets provide both inputs and outputs respectively.

Having catered for synchronisation, MIDI is next on the agenda and here you'll find a row of seven MIDI outputs followed by seven MIDI inputs. These are all independent ports and not clones of a single output often found on cheaper MIDI interfaces. Moving round to the front panel completes the total of eight with another MIDI in and out port for convenience when plugging in new gear or say, a session muso's weighted keyboard or MIDI drum pads.

In the far left corner is the MIDI Click 1/4" TRS jack socket. This is a very misleading title as it does so much more when set up using the supplied software, which Emagic describe as a 'customised decendant' of their SoundDiver editor/librarian package, but more on that later.

A row of eight red LEDs indicate the presence of a MIDI input on the relevant port with another eight green LEDs relaying the output status; all standard fare for devices of this type. Two pairs of LEDs show VITC lock (from incoming timecode) and VITC write (when generating timecode) with two LTC (longitudinal timecode) LEDs showing their respective status when in use. A further two LEDs glow confirming communication activity with the PC and Mac ports.

Remaining functions on the front panel are the Panic/Patch button, a Mac Thru switch, and the power LED.

In use

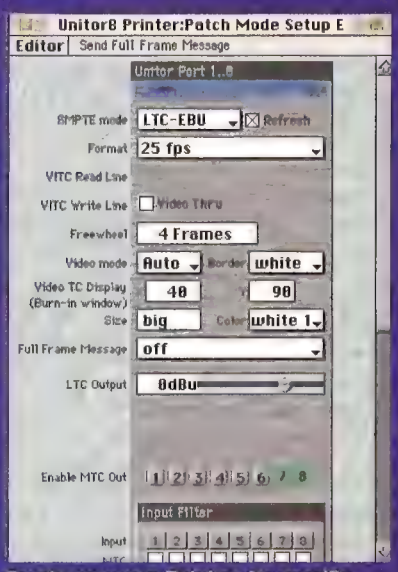
If you're familiar with setting up multi-port MIDI interfaces, then the initial procedures for the Unitor8 present few surprises. All the testing was done on a Mac, although a glance at the manual suggests that apart from the endless need for driver updates on PCs, Windows machines get an easy ➤

MODUS OPERANDI

Believe it or not, the name vertical interval timecode, or VITC, accurately describes the way it is employed in video applications. How a TV image is generated is not continuous; there are several fields which are employed to create the image you see, as the electron beams scan the screen. When the scanning of a field (or frame section) is complete, the scanning beam flies back to begin the next phase and there is a short timing gap called the vertical interval. This portion of space is used to store timecode information, which can be read without interfering with the picture. The advantage of VITC is that you get a constant timecode read-out, even in freeze-frame mode and backwards too. The vertical interval is also used to deliver CEEFAX and Teletext, and badly adjusted TVs will show this as an erratic fuzzy pattern at the top of the screen.

The Unitor8 can read VITC from a video and can display the timecode on screen if necessary, called burnt-in timecode (BITC). It's the image of seconds and frames whizzing by, seen frequently in pop videos because the producers believe we'll think it's cool and trendy. Sad eh?

Another important aspect of the Unitor8 is its conformity to the MTP mode legacy. MIDI Time Piece mode is the standard that appears on all decent Mac-based sequencers and was developed in the early days of multi-port sequencing by US hardware and software pioneers, Mark of the Unicorn (MOTU). Despite the options of OMS, FreeMIDI, and the like, if you choose to select MTP mode you can ignore all that and have your sequencer talk to a typical 8-port interface and get eight ports in and out without any hassle or any frills either. Some synth modules include this as an option, such as Yamaha's MU90/100R. Only two ports can be accessed though, yet the module becomes a 32-channel unit connected with just one serial cable. Furthermore, the module's MIDI inputs can be used as a MIDI interface.



Create your own Patches for specific Unitor8 tasks

Connect eight Unitors to each of your computer ports for 2,048 MIDI channels!

SPEC SHEET

Connections	
MIDI:	8 inputs, 8 outputs. Port 8 I/O on front panel
Jack input:	User defined functions for click (tempo) and sequencer control
Mini DIN4:	Two connectors for VITC timecode read and generate
1/4" jacks:	Two connectors for LTC timecode read and generate
Mini DIN8:	RS-422 for Mac serial communication and networking Unitor8s
Mini DIN8:	RS-422 Mac Thru for serial peripherals and networking
9-pin D-type:	RS-232 for PC interfacing
Power:	External PSU connection
Modes	
Emulation:	Yes (and FreeMIDI support)
OMS support:	Yes
Speeds:	Fast (up to 4MHz), Normal (1MHz) – software selectable
MME support:	Yes
Patch mode	Stand-alone use; 32 patches changed with Program changes
Platform support:	Mac & PC. Works simultaneously with both connected
Frame rates:	24, 25, 29.97, 29.97drop-frame, 30, 30 drop-frame

time too. Installation from floppy disk was straightforward, providing the Unitor8 Control application v1.0.5, plus the usual Readme file, and a firmware update in the form of a MIDIfile.

Having another interface already attached to one port and the Unitor8 on the other did call for some rather repetitive and tedious confirmations. Dialogue boxes would appear with practically every alteration made. Simply telling the software not to use OMS (which it detected) and to use another port involved about four alert messages. Each time you confirmed this was the selection you wanted, the Preferences box being worked on disappeared, so you had to start all over again with the next alteration. The Safety Messages preference sub-menu does let you change this situation, but it is a bind when you're just getting started.

Having established the port choice and the preferred driver system (OMS, Apple MIDI Manager, or neither, which defaults to Emagic's own driver) and ensuring that the Mac Thru button is not depressed, the software detects the Unitor8 and shows a brief progress bargraph during the process.

The next step is to install the inevitable update. This was a firmware update for the EEPROM within the Unitor8 hardware itself, not an interface software update. The software is rather clever in that it can detect Sysex information and the like within a MIDIfile and transmit it to the chosen device. In this case it hooks up to the Unitor8 automatically (which flashes like Las Vegas at night) and then confirms a successful update. While this is fairly simple to achieve if you've got your wits about you, the Readme file tells you to look at the Update section of the on-line help for guidance, which turns out to be no help at all.

There is no update section and this is further confused by the fact that the on-line help changes according to the part of the program you're using. The Computer part gives entirely different topics to the Patch section which does offer information on the firmware update. It's quite easy, just select open from the file menu. Now why didn't they tell you that in the first place? Especially as folk might not bother with the update if they can't find info, which consequently might well give their tech support personnel a few unnecessary headaches. To make matters worse, PC users with Unitor8 models that have serial numbers prior to 980501167 can't use the update due to a bug.

Talking of tech support, the manual could do with a lot more detail as the on-line help is relied upon for the nitty gritty which can be a real pain if you've got a small screen and you want to see the program and read the help at the same time. In fact the paper documentation provided has only five diagrams in it, and three of those relate to the Mini DIN4 plugs used for the VITC connections, which they really should have supplied in the first place!

If you've used FreeMIDI or OMS then areas of the Unitor8 Control application will appear familiar. Where the former choose to separate the duties involved into two applications for general routing and sophisticated patching respectively, the Unitor8 Control incorporates both into the same application. In fact, if you've got the full version of SoundDiver you can dispense with the Unitor8 Control application altogether. In either case, you can create up to 32 custom patches using the 8x8 matrix to filter out unwanted MIDI data for any of the input/output ports. The matrix expands if more units are connected. These patches also define the behaviour of the Unitor8 with respect to timecode, enabling different nameable configurations of LTC and VITC to be created defaulting to the chosen timecode frame rate.

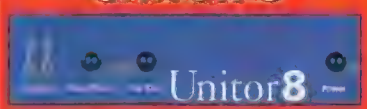
In Computer mode the mundane tasks of striping (generating) timecode are taken care of. The output levels, frame rates, and initial timecode start time are set from here for either LTC or VITC formats. All of this worked fine and was confirmed by the relevant front panel LEDs.

Verdict

The Unitor8 has many features that will appeal to the professional user, especially those involved with video work, which is no doubt the target audience. If you don't use VITC then you might not want to pay the extra, but if you've a ton of MIDI gear and an Apple Macintosh, using both serial ports will give you 2,048 MIDI channels with eight Unitor8s on each port! A costly set-up, but a unique Unitor8 feature that surely some larger studios will be willing to pay for. TM

More from: Sound Technology, Letchworth Point, Letchworth, Hertfordshire SG6 1ND
Tel: 01462 480000 Fax: 01462 480800
Web: www.soundtech.co.uk

EMAGIC UNITOR 8



WHAT WE LIKE

- Sophisticated interfacing software
- Multiple unit networking ability
- Simultaneous access with Mac and PC

WHAT WE DON'T LIKE

- Initial software set-up fussy
- No VITC break-out cables supplied
- VITC functions make it more expensive than typical LTC/MIDI interfaces

OVERALL

Sync/MIDI interface for all seasons. The VITC facilities make it ideal for video environments, but at a price.

The first name in monitoring Headphones...

More hit records and sound tracks have been mixed and monitored on beyerdynamic's range of headphones than any other headphones in the world.

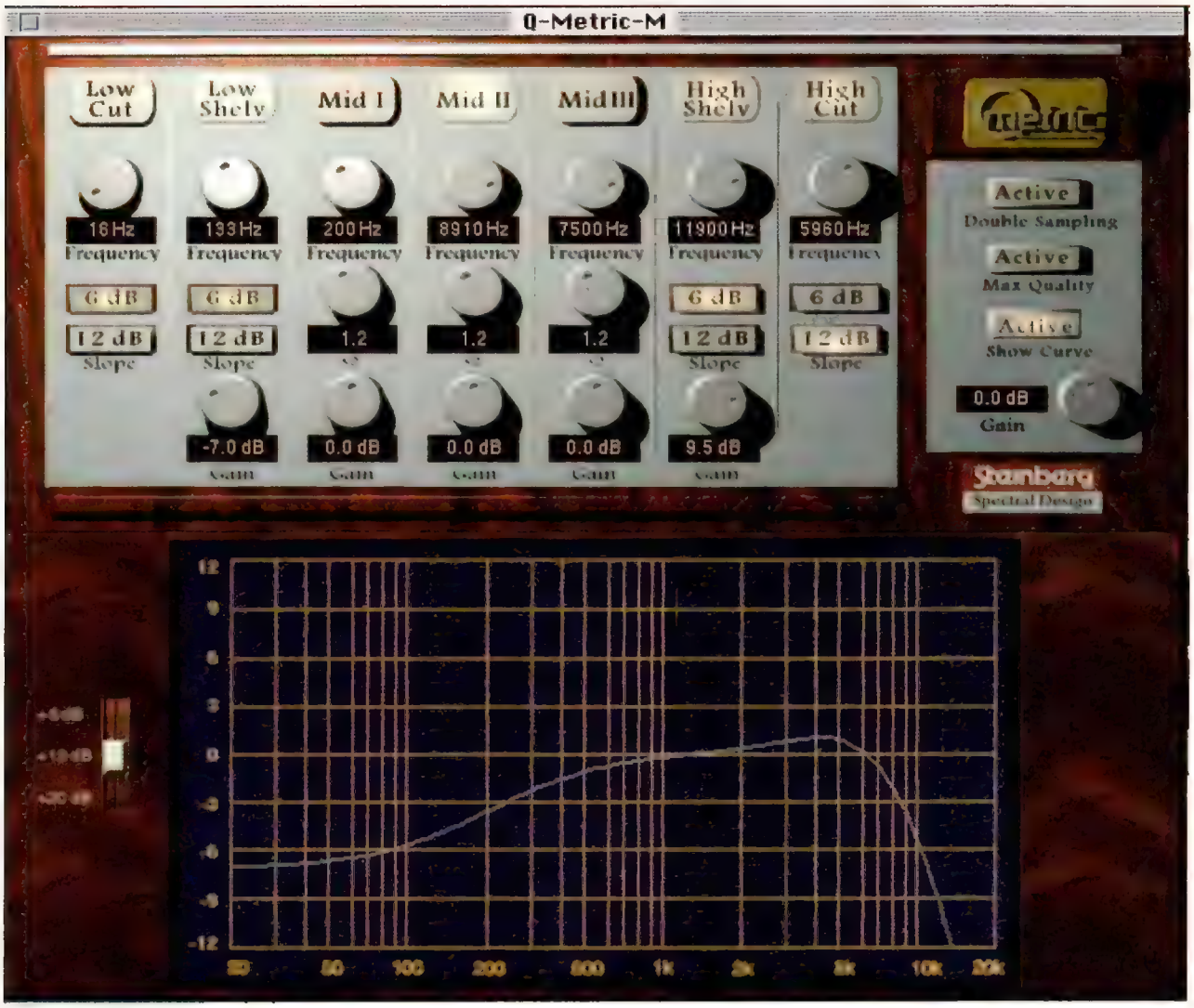
Our range of headphones are acknowledged by recording engineers and hit making musicians for their accuracy and fidelity.

The first name in monitoring headphones –
beyerdynamic... *Fidelity in Audio.*™

Send us a photograph of a well known musician using this model and we'll send you a t-shirt FREE !

for more information
Tel. 01444 258258
e-mail: sales@beyerdynamic.co.uk
Burgess Hill, W.Sussex RH15 9TN

beyerdynamic



STEINBERG Q-METRIC

MAC/PC VST EQ PLUG-IN £499

Quality usually comes at a price, as *Ian Waugh* finds with Steinberg's new high-end EQ

What is the most important effect in the studio? Without a doubt it must be EQ. Whether or not you agree, this seems to be the view of plug-in developers, judging by the number EQ plug-ins on the market. Q-Metric is the latest one from Steinberg and it's billed as "the Hi End Parametric EQ."

Overview

The Q-Metric pack includes DirectX and Cubase VST plug-ins for the PC and a VST plug-in for the Mac. Most major Mac digital audio software now supports VST plug-ins, although Q-Metric has no Premier or AudioSuite versions.

Q-Metric is dead easy to use. Using it well, however, is down to you and your ears. It has seven filter types: Low Cut and High Cut, Low Shelf and High Shelf, and three Mid parametric filters, each of which can be switched on or off independently.

Depending on the application you use it with, Q-Metric may present a mono or stereo control panel. In the stereo panel you can process left, right, or both channels. You cannot apply different settings to the left and right channels at the same time, although you could do them one at a time off-line if you wish.

All filters have a frequency dial that you use to set the operational frequency. For the Cut and Shelving filters this is the cut-off frequency, and for the Mid range EQs it's the centre frequency. The Mid range EQs also have a Q control, which determines the bandwidth of the affected ➤

A techno toon with the ol' before and after treatment is on this month's cover CD

➤ frequency. With the others you can select a 6dB or 12dB slope. Finally, all but the Low Cut and High Cut filters have gain controls.

There are also switches for Double Sampling, which as you'd expect, double the internal processing rate. Max Quality is used in conjunction with this to maximise the sound quality. Both functions require a lot of processing power, which is why you have the option of switching them off.

Q-metric's claim to fame is that it simulates analogue EQ units far better than other digital EQ processors, particularly at the higher end of the spectrum where processing can introduce noise and create a metallic sound. The result is very smooth and, indeed, quite warm. Very impressive, in fact. You can create a bit grunge in the upper reaches if you push the EQ too high but you'd have to be playing silly buggers to want it that high, anyway.

Then there's the frequency curve display, which opens in a separate window. For the visually-oriented, this helps you see what frequencies are being affected and how. The curves change as you adjust the controls, and although you can't drag the curves around the screen, this isn't a facility we missed.

It's particularly easy to home in on specific frequencies with the Mid band EQ by narrowing the Q setting and moving the frequency control up and down, effectively scanning the audio for the sound you want to home in on.

FEATURES

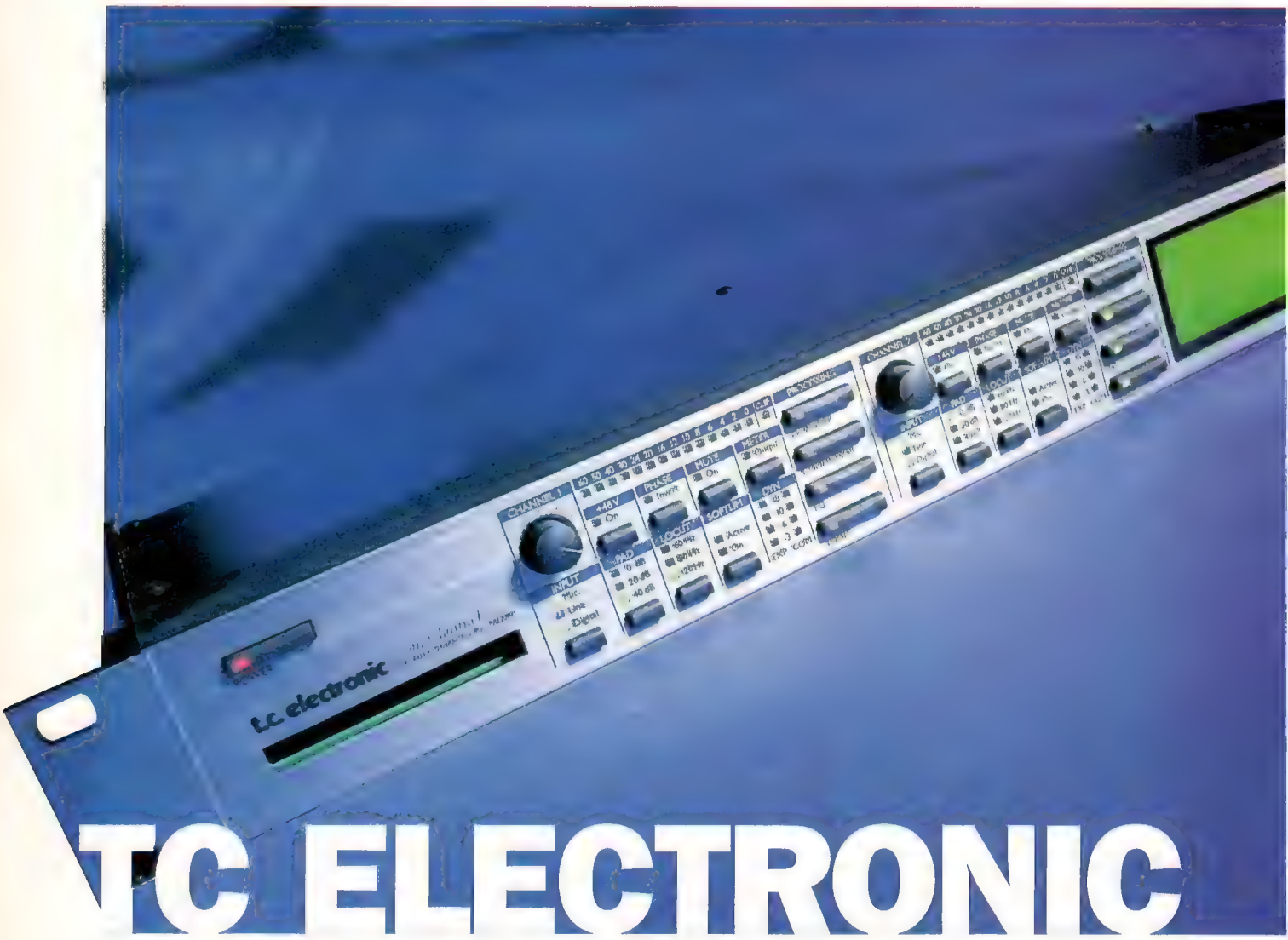
- 7-band parametric EQ
- Individual bypass for each band
- 3 fully-variable Mid bands
- Internal double-sampling processing
- 24-bit clean MDNS filters
- Frequency response graph
- Automation within Cubase VST

Verdict

Q-Metric is a joy to work with. Its settings cover the span of the audio range enabling you to tweak the bits that need tweaking. In particular, the three Mid range EQs let you get in there and sort out problems in specific areas, and the frequency display shows you exactly what frequencies you're fiddling with. Those 12dB slopes make a significant contribution, too. The sound quality is high enough to satisfy even the most demanding user, even at the high end.

The only fly in the ointment, it must be said, is the price. It's going to limit sales, which is a shame because it's the sort of EQ everyone should have. But if you're not satisfied with the EQ built into your digital audio software and are looking for something a bit more high-end, then £499 will get you this truly professional tool. ■

More from: Arbiter Pro Audio, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Hertfordshire, WD6 5PZ Tel: 0181 2075050 Fax: 0181 2074572



TC ELECTRONIC GOLD CHANNEL

DIGITAL RECORDING CHANNEL £1,820

Have TC Electronic come up with the ultimate front-end for direct-to-digital recording? *Bob Dormon* finds out

Remember mixing desks, anyone? You know – those big slopey tables with lots of knobs and coloured lights. Can't remember them eh? Ah, you must have moved into the world of virtual mixing then, where knob twiddling has been replaced by mouse groping. Presumably, there's a hard disk recorder somewhere on the scene too, and when it comes to recording, you're probably doing one instrument at a time, or stereo at the most. Okay so not everyone works this way, but a lot of people do, and TC Electronic know that; hence they've come up with the Gold Channel.

The Gold Channel is aimed at audio purists or fussy buggers (take your pick) who want their signals to skip the mixing desk and go directly to the audio interfacing of their chosen recorder. The Gold Channel does just that, in both the analogue and digital domains.

Even if you're not a fussy bugger, the appeal of the Gold Channel for those with digital audio recorders is fairly obvious. Here, in a neat 1U rack unit, are a couple of mic pre-amps together with phantom power, plus an array of parameters that you can save in their entirety and recall as desired. That includes the input gain stages too!

Overview

The TC Electronic Gold Channel is a stereo/dual-mono digital signal processor whose main duty is mic preamplification. It ➤

➤ features 24-bit A/D and D/A converters, copious quantities of digital interfacing, plus dynamics, EQ, and fairy-dust treatments for your audio signals.

The back panel of the Gold Channel reveals just how serious TC Electronic are about their claims to have "the ultimate solution to direct-to-disk recording." The power switch next to the IEC mains socket cuts the power completely, whereas the front panel switch merely sets the unit to a standby mode. The unit can take voltages from 100-240VAC without the need for the user to switch ratings – ideal for mobile musos. A cluster of balanced XLRs provide two channel/stereo inputs and outputs. These have gold contacts to ensure a clean connection, and that's it for the analogue world.

Moving across the back panel you enter the digital domain, beginning with two optical interfaces (in and out). These will access any two ADAT channels (out of a possible eight), and send them back on your choice of channels. The remaining six unused channels are not processed by the Gold Channel.

Conveniently, you can use the optical interfacing for S/PDIF protocols too. Referred to as Toslink, this describes the physical optical interface and prevents confusion when setting up the unit on-screen, as it also has a choice of coaxial S/PDIF ins and outs.

Next is the Sync input. This appears on a single coaxial socket, which makes it easy to hook up to an S/PDIF clock source. If you're a traditionalist and like to interface your word clock with BNC connectors, then supplied with the unit is a neat coaxial male-to-BNC female adaptor. The AES/EBU I/Os follow this, appearing on XLRs as usual. Unlike S/PDIF, the AES/EBU format can handle 24-bit audio. Alongside this interfacing are the coaxial S/PDIF I/Os, again appearing with gold contacts. The back panel ends with the usual MIDI In, Out, and Thru connections, plus an external control input on a 1/4" jack for use with a GPI compliant pedal/fader.

The front panel is crammed full of meters, LEDs, a decent sized LCD, and a plethora of switches. The power switch, like all TC devices these days, needs to be held in for a second or two to power down and blinks when the Gold Channel is off to show the presence of power to the unit. Beneath it is another TC Electronic regular, the PCMCIA slot. This supports cards up to 2Mb and is a handy way store 999 of your favourite settings other than using the 200 user memories within the machine itself.

User-friendly access

Two identical sections, channel one and channel two, provide user-friendly access to the sort of settings you'd hunt around for on a conventional mixing desk. When twirled, the input gain pot immediately calls up a graphic representation on-screen. This gives an overview of how the two channels are interacting (dual mono or stereo) and provides the Auto Gain option for the discerning novice. Adjacent to this is a 15-segment LED meter, and below that are switches (each with their own activity LED) for phantom power, phase invert, channel mute, and a changeover switch to enable the meters to show the channel's output.

The bottom row of switches have more than one function and toggle through various settings with the status clearly defined by an LED. Input selections are mic, line, and digital; pad can be 0dB (inactive), 20dB, or 40dB. A high-pass filter can round off the bottom end by -12dB per octave at a cut-off of 60, 80, or 120Hz. A soft limiter is provided, which has its own activity LED to show when it is working. A similar feature appears on Apogee's AD-8000 (see issue 54). Each channel has two additional 4-segment meters to show the extent of the internal expander and compressor's action, plus a processing section. Here, four large keys illuminate to reveal the signal processing involved within a program's set-up. You can de-activate a processing stage by pressing the appropriate key. The sections are Expander, Compressor, EQ, and Tools, each of which have at least a couple algorithms to choose from.

The second half of the front panel is devoted to the LCD readout, four function keys (Programs, Edit, Set-Up and Utility), plus the control keys and knobs that are needed to navigate the seemingly endless number of parameters within the Gold Channel.

SPEC SHEET

Analogue Mic/Line Inputs	
Connectors:	Balanced XLR
Dynamic Range:	>103dBu (unweighted)
Frequency Response:	20Hz to 20kHz +0/-0.5dB (line & mic with pad)
Crosstalk:	<-80dB, 20Hz to 20kHz
Phantom Power:	Mic only, +48V
A/D Conversion:	24-bit (1-bit, 128x oversampling)
Analogue Outputs	
Connectors:	Balanced XLR
Dynamic Range:	>100dB (unweighted), >104dB(A)
Frequency Response:	+0/-0.5dB
Crosstalk:	<-60dB, 10Hz to 20kHz, typical -90dB @ 1kHz
D/A Conversion:	24-bit (1-bit, 128x oversampling)
Digital Interfacing	
Connectors:	XLR (AES/EBU), Coaxial (S/PDIF), Optical (Toslink/ADAT)
Formats:	AES/EBU (24-bit), S/PDIF (20-bit), EIAJ CP-340, IEC 958, EIAJ, Optical (Toslink), ADAT Lite Pipe
Output Dither:	HPF TPDF dither 8-24-bit
Word Clock Input:	Coaxial, 75Ω, 30 to 50kHz
PCMCIA Interface:	Type 1 cards, up to 2Mb SRAM
MIDI:	In, Out, Thru
GPI, Pedal, Fader:	1/4" jack socket

Building blocks

Editing a Gold Channel program reveals the DSP processing blocks. There are four available per channel, which are linked together serially; one effect feeds into the next and so on. You can edit the effects for each individual block under the Edit section or cursor along the top menu to Routing and change the actual processors available. At each end of this chain are the In and Out sections, which are also editable. The Input section provides an M/S (main and side) matrix for this old- ➤

Comprehensive digital I/O

Channels 1 and 2 have an identical set of controls

school microphone arrangement, plus individual channel delays of up to 340ms. These delay parameters can also be shown in feet or meters to suit particular miking calculations. Using the 56 x 128 dot graphic display to the best advantage, a phase correlation meter appears in this window too, to ensure the delays introduced can overcome any stereophony problems without being counter-productive when heard in mono. The Output section provides panning for the two channels and additional M/S information, again with individual channel delays and an output phase correlation meter.

The Layout section deals with the behaviour of the two inputs where the two channels can be summed for pre or post processing. Inserts can be created using the interfacing to send the incoming (pre) or outgoing (post) signals to outboard gear. This area, in conjunction with the Routing section, is the key to getting the most out of the Gold Channel as you can create entirely different block effect arrangements for the two channels or share the same set-up to 'stereoize' mono inputs.

The processing blocks available are: Expander (Easy Gate or Advanced), Compressor (Soft or Vintage), Equalizer (Easy or Advanced) and Tools (De-Esser, Dynamic Equalizer, DRG and RIAA). The dynamic equalizer is like a de-esser with a broader frequency range available. DRG, the digital radiance generator, adds low-order harmonics for analogue warmth. Finally, RIAA is a recognised equalizer curve, enabling you to plug your turntable into the Gold Channel mic inputs.

In use

The wealth of presets invite you to do more with the Gold Channel than just plug mics into it. As it can perform as a D/A converter or an insert in both digital or analogue environments, the opportunity to smooth out, EQ, and digitally radiate your pre-recorded material should not be overlooked. There's a few guitar presets that perhaps suggest there's more in the box than there actually is. The Marshall 900 preset toughened up a DI'd guitar with some rather chunky EQ which could have cut through a bit better, but the sound was a far cry from the sound that one usually associates with Marshall amplification. Trying out some of the cleaner settings produced controlled tones without stifling the expression, but the top end could have been more sizzling. Then again, that's presets for you, you can always tweak them to taste. Perhaps their intended use is for the gear mentioned in the program title rather than as an emulation of them.

Using a piezo guitar for their Piezo Guitar Wide program gave a very pleasing ambience, with a well-behaved gate that was both efficient without being too over-enthusiastic, and assertively tracked the decaying signal without fluttering to a close. Slap bass presets were also very effective in providing the necessary compression without being overly obvious. Here the Soft Limiter got a chance to show how splendidly it protects the Gold Channel from the blips of digital overload. If you're thinking that the responses will differ according to your instruments, you're dead right of course, but give the no-brain Auto Gain a try. It really works. Just press enter, play along for a bit, press enter again and your level (with your pre-specified headroom allowance) has been set. No pain, lotsa gain.

Vocals are where the Gold Channel can expect to find an adoring audience. There are settings for rap, male, and female vocals, plus favourite mic impressions. The compressor works almost invisibly with the EQ, together with the filter section providing an antidote to lousy mic technique and the pops that go with it. Being able to recall the settings entirely means that other than atmospheric pressure and temperature conditions, you should be able to restore vocal settings in a trice. Just don't let prima donna vocalists know, or you'll be spending three weeks on a Rice Crispies voiceover!

Verdict

The Gold Channel looks like the final piece in the recently-revised product line from TC Electronic. The G-Force satisfied guitarists by providing the wow and grunge effects missing from the earlier M2000 Wizard. The FireWorx trumped the G-Force by having comprehensive digital interfacing and more processing power. Now the Gold Channel looks set to provide the answer to those keen to follow a minimum signal path and at the same time addresses the needs of broadcast situations where recalling settings for programmes and/or commercial recordings is required.

The fact that it is as clean as a whistle should also come as no surprise. It *is* a TC device after all, and while they don't come cheap, the 24-bit processing and the ability to run one channel at 96kHz will certainly ensure the Gold Channel's usefulness for years to come.

Those looking to go beyond the minijacks or phonos provided as standard audio interfacing with most computers may well be faced with some tough decisions regarding the PCI audio interface cards available. Do you want 24-bit recording? Do you need analogue interfacing? Do you want optical interfacing? These questions are more or less overcome by the Gold Channel's comprehensive connectivity, and so it should come as no surprise that TC Electronic are touting it as the ultimate solution to direct-to-disk recording. Sounds great doesn't it? And at just £1,800 there's a good chance that you won't be disappointed, either. TM

More from: Raper & Wayman, Unit 3, Crusader Estate, 167 Hermitage Road, London N4 1LZ Tel: 0181 800 8288 Fax: 0181 809 1515

TC ELECTRONIC GOLD CHANNEL

WHAT WE LIKE

- Total Recall of all parameters
- 24-bit A/D and D/As
- Comprehensive connectivity

WHAT WE DON'T LIKE

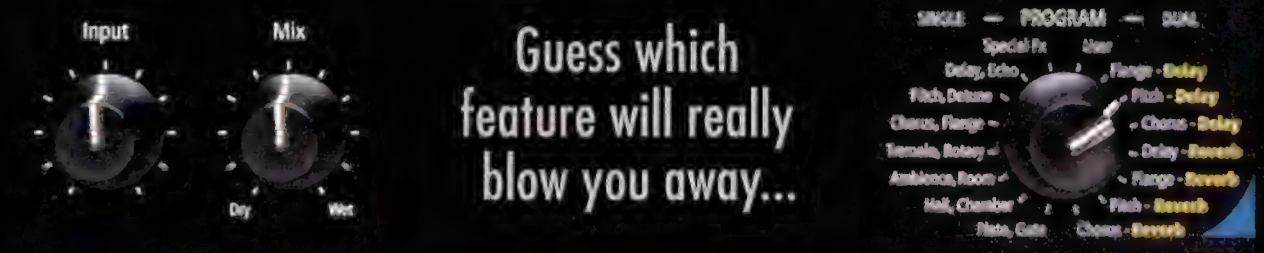
- No headphone output
- Only provides Dynamics, EQ, and enhancer effects, plus a basic delay

OVERALL

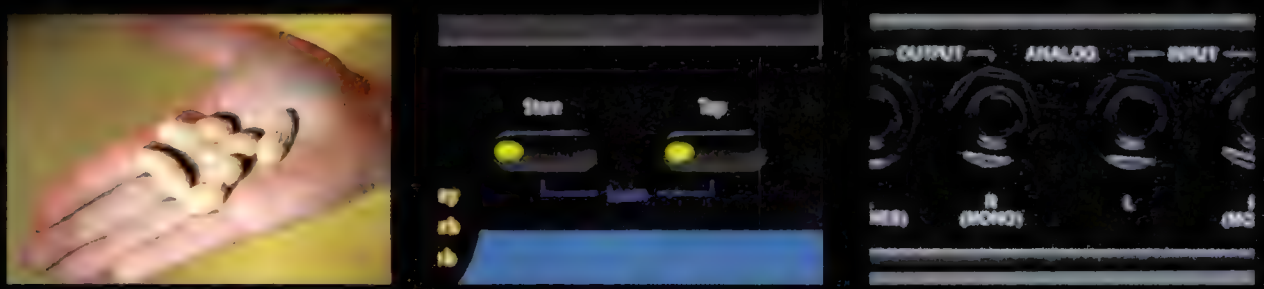
More than just a versatile dual mic/line pre-amp with some great-sounding presets. Pity they couldn't have squeezed in pitch-changer, though.

Sleek, stylish and...very clean

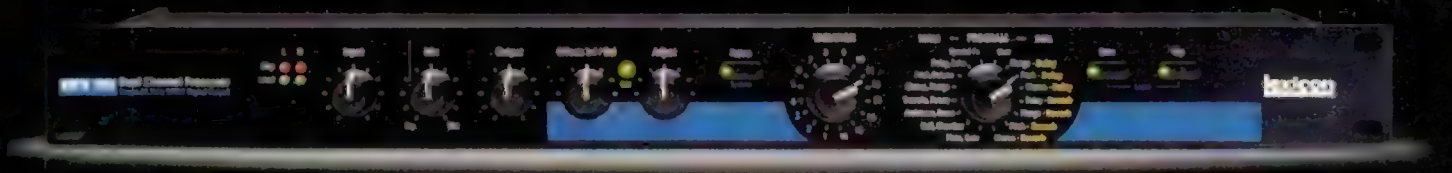
The New MPX 100 Dual Channel Processor



Guess which feature will really blow you away...



£249.99 • Dual Stereo FX; 5.7 Sec Delay • 24-bit Internal Processing • 240 Presets; 16 User Programs



The MPX 100 is a true stereo dual-channel processor with 24-bit internal processing, 20-bit A/D-D/A and S/PDIF digital output for a very affordable price. Powered by a new version of Lexicon's proprietary *Lexichip*,™ the **MPX 100** has 240 presets with classic, true stereo reverb programs such as *Ambience, Plate, Chamber* and *Inverse* as well as *Tremolo, Rotary, Chorus, Flange, Pitch, Detune, 5.7 second Delay* and *Echo*. Dual-channel processing gives you completely independent effects on the left and right channels.

A front panel *Adjust* knob allows instant manipulation of each effect's critical parameters and an *Effects/Balance* knob lets you control effect level or the balance of dual effect combinations.

An easy *Learn* mode allows MIDI patching of front panel controls. In addition, tempo-controlled delays lock to Tap or MIDI clock, and Tap tempos can be controlled by audio input, the front panel *Tap* button, dual footswitch, external MIDI controller or MIDI Program Change. Other features include dual, 2-stage headroom indicators, a headphone output, a software-selectable MIDI OUT/THRU port, pushbutton or footswitch selection of dry or muted audio output and a 20Hz to 20kHz ±1dB Frequency Response.

With all this, the price is a nice surprise – but the feature that will really blow you away is the superb audio quality you can only get from Lexicon.

Heard In All The Right Places

Lexicon

Full information on the MPX 100 is available on this web site – www.stirlingaudio.com or call 0171 624 6000 for nearest dealer and FREE Brochure

SOUNDTECH USA

Smart Sound

Nobody can touch SoundTech for Price and Performance

All prices include VAT — **Buy Direct – Take Delivery Tomorrow**

POWER SOURCE SERIES – AMPS

TOURING AT ITS BEST

PS802 – Digital Power Amp

Power Source – Clean Digital Power - our 1 rack unit, 16lb Marvel
2 x 400W RMS (800W Mono) (Special Price £449)

~~£499~~ £449 Special Price

BEST SELLER

Reviewers say:
"PLENTY OF BASS"
"BIG BLAST FROM A BABY BOX"

POWER LAB SERIES – AMPS

A/B Output Topology delivers solid bass and crystal clear highs.

PL200	2 x 100W RMS (200W Mono)	£169
PL350M	**Monitor Amp** with Graphics 350W – 2 Ohms	£199
PL602	2 x 300W RMS (600W Mono)	£279

£169 *Outstanding Seller*

£199

£279 *Unbeatable Value*

We also supply stands, cables, snakes and rack cases.

£575

£399

PL802	2 x 400W RMS (800W Mono)	£399
PL1402	2 x 620W RMS (1240W Mono)	£479
PL1204	Four Channel Amp, 4 x 280W RMS, 2 x 560W – 8 Ohms	£575

Reviewers say: "REALLY PUNCHY"
"SUPERB AMP FOR THE PRICE"
"AUDIO QUALITY IS EXCELLENT"
"A GOOD SOUND WORKHORSE"

POWERED MIXERS

MM10SD 10 Channel 900W (450W x 2 stereo @ 2 Ohms) £599

STAR VALUE STEREO

MegaMix Rock Solid Rugged & Roadworthy 128 Digital Effect, Dual 9 Band Equaliser, fully expandable, built in sub woofer crossover, many exclusive SoundTech features £269

MM8D
8 Channel 450W Mono @ 2 Ohms £489

MM6D
6 Channel 450W Mono @ 2 Ohms £429

Reviewers say:
"PLENTY OF OOMPH"
"SPACIOUS AND CLEAN – TONED REVERBS"

QuickMix 6
Powered Mixer, simple to use, high quality sound £269

SPECIAL

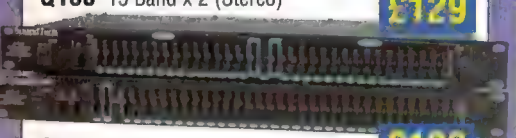
£199 when purchased with speakers

GRAPHIC EQUALISERS

PRO QUALITY WITH XLR CONNECTIONS

- Input Level Controls
- Peak Indicator
- Accurate Feedback Eliminator
- By Pass Switches

Q150 15 Band x 2 (Stereo) £129



Q310 31 Band with Variable Low Cut £129

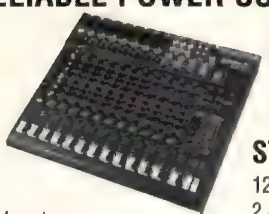
Reviewers say: "AN EXCELLENT BIT OF KIT"
"SENSIBLE TOOL AT A SENSIBLE PRICE"

MIXERS

ALL WITH BUILT IN RELIABLE POWER SUPPLIES

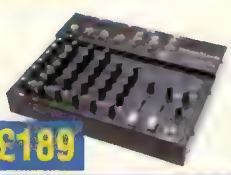
£899

ST2442
24 Channel Input
4 + 2 Outputs



ST1602
16 Channel Input
2 + 2 Outputs £399

ST1202
12 Channel Input
2 + 2 Outputs £299



£189

CM802
Analogue Echo
8 Channel Input
2 + 2 Outputs

Reviewers say:
"SOUNDTECH'S LITTLE WONDER"
"SOLID FEEL"
"IDEAL FOR LIVE AND HOME RECORDING"
"FINE RECORDING, MASTERING AND LIVE MIXER"

ELECTRONIC CROSSOVERS

- Ultra Quiet
- Overlapping Frequencies
- User Defined Crossover Points
- Mono-summed Sub Woofer Output
- XLR & Jack Connections
- Low Cut Filter eliminates rumble below 15Hz
- X10 Frequency Range Switch

USES HIGHLY SPECIFIED LINKWITZ-RILEY FILTERS

X234 2 Way Stereo, 3 or 4 Way £149 £149

£199

X345 3 Way Stereo, 4 or 5 Way £199

CALL FOR INTEREST FREE CREDIT & CREDIT TERMS

DIRECT ORDER LINE – FREEPHONE
0800 731 7541
INFORMATION LINE (24 Hrs)
01883 346647
Fax: 01883 340073

CALL FOR SPECIAL OFFERS

"Simply Sounds Better"

Smart Sound Direct, FREEPOST SEA5105, Units 5&6, 38/40 Town End,

10 day money back guarantee

EDITOR'S CHOICE

AUDIO TECHNICA AT4060

VALVE CONDENSER MICROPHONE £1,405

A top-quality microphone can put the 'pro' into pro studio. *Alan Branch* looks for that magic touch in Audio-Technica's AT4060

So you want to buy the best microphone you can afford? One that will give a warm crisp natural vocal, but one that can also be used with a guitar or drum kit. The question is, would it handle something like a kick drum? Well, hot off the mic stand is the AT4060, the first valve type microphone to be delivered by Audio-Technica.

The AT4060 is the latest in their range of professional studio condenser microphones on the market. Now, like many other microphone companies, Audio-Technica have produced a cardioid vacuum tube capacitor microphone, which means they are joining the growing trend of combining high quality, low noise electronics with that classic valve sound. This is what original mics like Neumann's U67 and U47 had, a classic 'warm' sound. More recent entries into the market include the AKG Solid Tube reviewed in the July '98 issue, which is probably one of Audio-Technica's main competitors.

Talking about the design of the AT4060, Nick Powell, Marketing Manager for Audio-Technica, states, "The 4060 has not simply been designed to add to the long list of tube mics available on today's market. It features certain characteristics which mark it out as a very individual item with few contemporaries." You may well ask, "What are these characteristics?" Read on...

Overview

One of things that make this mic a little bit special are the valves themselves. The Sovtec 6922 vacuum tubes are hand selected and individually pre-aged and tested to ensure the optimum performance will remain constant over years of use, a very interesting and admirable idea. The mic itself can handle an exceptionally dynamic range, up to 131dB, and the ability to go up to 150dB SPL. If you're into recording aeroplanes taking off, this mic will do nicely, it will also cope more than adequately with 'loud' singers.

The mic is supplied in a standard type of foam-lined plastic case for storing when not in use, an external power supply, complete with a rack mount adapter for 19" racks, 10m of connecting cable, and a ➤

SPEC SHEET

Elements:	Two externally polarized (DC bias) capacitors
Polar Pattern:	Cardioid (Unidirectional)
Frequency Response:	20Hz to 20kHz
Max input sound level:	150dB SPL (1kHz at 1% THD)
Signal To Noise Ratio:	75dB (1kHz at 1Pa)
Dynamic range (typical):	131dB (1kHz at 150dB SPL)

➤ shock mount cradle and IEC power lead, unfortunately fitted with an American-type 3-pin plug, so make sure you get one supplied with a UK equivalent. Most microphones of this quality and stature come with a separate carrying case. The AT4060 seems to be designed to be used permanently in the studio and therefore does not come with a case. Although the power supply fits into a rack, it would have been nice if Audio-Technica had provided a carrying/storing case for all the other accessories as well.

The AT4060 incorporates a dual-diaphragm configuration using 2-micron thick, vapour-deposited, gold, large diaphragms. These are also aged to ensure constant performance over time. It is a dual-element vacuum tube capacitor-type with a cardioid polar pattern and a frequency response of 20Hz to 20kHz.

Connection to the base is through a 6-pin XLR, which appears to be gold plated. The mic connects to the power supply using Neutrik connectors. The supplied shock mount is very well built, with an elastic suspension make-up, and seldom has a mic fitted so snugly! Definitely precision engineered. The mic can turn through 180 degrees and can also be locked at the top with a collar, which is tightened with two thumb screws.

The power supply is a smart, solid, black box, with the rear panel showing the mic input, a standard XLR output for the audio, a ground switch, switchable power supply from 120 volts or 230 volts, and an IEC socket. On the front there's an On/Off switch and a red LED to show when the unit is switched on. The box comes pre-drilled ready for rack mounting. There are no switches on the microphone or the power supply.

Given the high SPL rating of the mic, Audio-Technica have opted to omit any type of pad. Quite noticeable also is the lack of a bass roll off. This is a fixed cardioid mic, so there are no switches for alternate polar patterns either. These omissions do not remove any of the mic's performance, just limit a few normal features usually found. It does save money though.

In use

The mic came at a perfect time for testing as we were just starting the recording process of a new album. Setting up three standard studio mics side-by-side, these were then tested with male and female singers to measure the results as objectively as possible.

Comparing the AT4060 to a variety of other microphones in the studio, the characteristics of this mic soon become apparent. A good sound was easy to get with relatively no EQ, just a correct position. Remember, when positioning a vocalist, the sound of the frequency response changes. By angling the mic from one side to the other the brightness can be reduced. As the vocalist gets closer to the mic, the low frequencies increase. Because the mic is sensitive to any 'floorboard-stomping, foot-tapping singers' and there is no low frequency roll off, it all comes down to how much the suspension shock mount will minimise unwanted vibrations.

While testing with instruments like acoustic guitar or percussion, the quality of the mic and broad frequency range can really be appreciated as it keeps the sound very natural. Perfect for any kind of digital recording. The AT4060 is very quiet and very warm, yet still retains all the clarity of the high frequencies. The bottom end is warm and not boxy, keeping it tight and very controlled. The greatest contrast comes from a comparison with an AKG C414, which gives its usual 'hard' sound, compared to the smooth sound of the AT4060.

The fixed polar pattern of cardioid obviously means this mic lends itself to certain types of applications. Tested with vocals, guitars, cymbals, even instruments that have high transient sound, this mic produces a lush sound. Even the close-miked proximity effect with a vocal gives a great bottom end, without sounding too boomy. The proximity effect occurs as you get close to the mic, about two inches or so. There is a lift in the bass response that is common among cardioid type mics, and can be used to good advantage by a vocalist that has good mic technique; moving closer to get a deep sound to the voice and pulling back when starting to sing louder.

Verdict

This microphone is excellent. A superb, top quality tube sound combined with quiet circuitry, The AT4060 will appeal to those looking for a high quality vocal sound. While not being the cheapest, at £1405, this is certainly the cheapest mic of such quality and build. With the versatility of the high SPL and the ability to be used with guitars and high dynamic instruments like drum kits, this mic will certainly stand up to a lot more than perhaps other valve microphones, which usually come with a 'handle with care' warning. For a professional mic that covers many applications, whilst giving warmth to a recording, especially anything digital, there isn't a better microphone made to this specification at this price. ™

More from: Audio-Technica Tel: 0113 2771441 Fax: 0113 2704836 Email: sales@audio-technica.co.uk

AUDIO TECHNICA AT4060

WHAT WE LIKE

- Lush, rich sound
- Pre-aged tubes
- High SPL

WHAT WE DON'T LIKE

- No carrying case

OVERALL

A well made and designed microphone for someone looking for top quality without the price to match.

The external power supply can be rackmounted

SONY

http://professional-audio.com

D P S - V 5 5 M

If you're into atmosphere, look into the latest digital effects processor from Sony. The new DPS-V55M has 45 algorithms, recreating the atmospheric sounds of some of the greatest US musicians. It features a microphone input and vocoder function. Mono, stereo and four channel surround sound effects. Even 200 stunning presets to make it easy to program. What's more, it's even easy to afford. The new DPS-V55M from Sony. If you're looking for atmospheric sound, look no further.

The sound you've been looking for

For more information or to arrange a demonstration – call us now on 0990 331122 or simply complete and return the Freepost coupon below.

PROFESSIONAL AUDIO

Please send me more information on DPS-V55M. ☐ Please contact me to arrange to see a Sony specialist for a demonstration. ☐ TM V1

Name (Mr/Mrs/Miss/Ms) ..... Job Title ..... Company .....
delete as appropriate

Address ..... Postcode .....

Tel ..... Fax ..... E-mail .....

Completed coupons should be sent to Sony Broadcast & Professional UK, FREEPOST (OF1503), Aylesbury Road, Thame, Oxon., OX9 3ZY

ARBORETUM RAY GUN

MAC/PC NOISE REDUCTION PLUG-IN £99

You want to wave goodbye to unwanted noise, but don't have mega-bucks? *Ian Waugh* might have the answer...

"Zap! Blast!" goes the Ray Gun as it tracks down and terminates errant noise and clicks. Well, it doesn't actually; it's the zap and blast noises it tries to get rid of. Some sort of reverse marketing philosophy coming into play here. Yes, it's another noise zapper, designed to remove hum, hiss, snaps, crackles, and pops from audio recordings. "Just point, aim, and shoot," it says. You can, but you'll probably want to fiddle with the controls a bit, too.

On the Mac, Ray Gun is compatible with several pieces of software including Peak, Deck II, Studio vision, Digital Performer, Logic Audio, Cubase VST and Adobe Premier. There are also AudioSuite and HyperEngine versions, so there can't be much it doesn't work with. HyperEngine is a shell program that enables you to run Ray Gun and other Arboretum plug-ins as stand-alone applications, and it's included with the program. On the PC, Ray Gun works as a DirectX plug-in, making it compatible with all the major, and not so major, PC-based digital audio applications, and you get a stand-alone version, too.

Master blaster

Ray Gun has three sections: Noise Reduction, Pop, and Filters. The Noise Reduction has Threshold and Attenuation sliders and is designed to remove broadband noise such as tape hiss, fan noises, and a range of background noise with a consistent 'signature,' that is, which has a stable 'tone', not noise that continually changes, like car noises or wind.

The Threshold sets the filter level. The ➤

Software and audio demos of Ray Gun are on this month's cover CD

FEATURES

- Noise Reduction
- Pop/click removal
- Rumble (50Hz and 60Hz filters)
- Adjustable output level
- Mac and PC-compatible plug-ins
- Stand-alone apps included
- Real-time preview

➤ higher the setting the more the filter cuts in and, hopefully, the lower the noise gets. Attenuation determines how much of the signal is removed, and as you adjust the slider you'll hear the hiss disappearing from the signal, leaving the source behind.

The Pop section removes pops and clicks and has only one control, labelled Sensitivity. Raising the slider decreases the volume of the clicks, and you have to whack it up pretty high before it affects the source material, although this varies according to the content of the source. It may not completely remove a pop if it's low-level.

The Filters section has three filters. Rumble is designed to remove the rumble that is usually associated with vinyl recordings. There are 60Hz and 50Hz filters to remove ground loops and hum from AC mains in the USA and Europe. These two settings are mutually exclusive. The filters are preset, so nothing to fiddle with here. There is also an Output section where you can compensate for any overall reduction in output due to processing. The Mac version has output meters, too.

In use

When testing this sort of program, our instinct is to give it a really nasty recording to see how well it copes. And that's just what we did. Maybe this was a little unfair as only the most ardent vinyl-o-phile is likely to have LPs in such poor condition as the material we asked Ray Gun to put right.

Trying to remove serious noise means whacking up the Noise Reduction controls. However, whack 'em up too much and they create a pumping effect. The Pop section struggled with some clicks, too, so just to make sure they were removable we gave them to the Sonic Foundry Click Removal plug-in which removed them cleanly and with consummate ease.

Ray Gun seems to work well as long as you're not processing seriously zapped recordings and, indeed, on a range of mildly flawed material, the program worked very well.

Verdict

If you simply want to clean up a few LPs before transferring them to CD, Ray Gun is worth checking out for ease-of-use alone, but if they're well-worn and you've been careless with the needle they may need stronger medicine. TM

More from: Unity Audio Tel: 01440 785843 Fax: 01440 785845

ARBORETUM RAY GUN

WHAT WE LIKE

- Easy to use
- Serial number for copy-protection
- Low price for a digital audio plug-in

WHAT WE DON'T LIKE

- Interface too dark, man
- Could be more effective
- On-disc documentation

OVERALL

A low-priced noise reduction/vinyl restoration plug-in. Not so effective with seriously flawed material

World renowned MIDI to CV Converters and Retrofits

KENTON electronics ...the professionals' choice

MIDI TO CV CONVERTERS

PRO SOLO £99.99

A single channel converter featuring V/Oct & Hz/V control, 5 Gate/S-trig options, pitchbend, portamento, transpose, 3 note priorities, single/multi-trigger, MIDI syncable 9-waveform LFO, auxiliary CV, DIN sync 24 mode, MIDI analyser mode, Thru socket, digital display and non-volatile setup memory.

PRO-2000 £229.95

The easy-to-use PRO-2000 drives up to 5 CV/Gate synths - each on its own MIDI channel! (plus optional Wasp/DCB/ KADI synth). Features V/Oct & Hz/V, Gate/S trig options, pitchbend, portamento, transpose, selectable note priority, single/multi trigger, 2 MIDI syncable 9-waveform LFOs, 2CV + 2 Gate & 5 fully-programmable outputs (can be CVs, gates, velocities, controllers etc.). Programmable clock out jack (for arpeggiator clocking etc.) DIN sync 24 output, MIDI channeliser, MIDI Out & Thru sockets, 7 memories, LCD display, easy editing & tuning, rugged steel case.
Pro-2000 Optional extras: 1U rackmount kit, Polyphonic DCB port, KADI.Wasp port

For the serious studio PRO-4 £499.96

The Pro-4 can drive up to 10 instruments and has features similar to the Pro 2000 above, but for 4 monosynths. It includes 4 LFOs & 8 auxiliary CVs and a polyphonic mode. Extensive control is provided via MIDI sysex, also DCB, KADI & Wasp ports are fitted as standard, as are Din Sync 24 and clock outputs. 1U rackmount case, MIDI Out & Thru sockets and much more. Now includes 4 channel Hz/V card as standard. The ultimate analogue synth user's dream machine.

INTERNAL MIDI RETROFITS AND SOCKET KITS

We continue to supply our extensive range of MIDI retrofits, self-install MIDI kits and socket kits for pre-MIDI synths. Too many to list here individually, MIDI retrofit prices start at £117.50. Please enquire for prices on your particular MIDI-to-analogue requirements.

PRO KADI - the MIDI trigger unit £124.90

Perhaps the unsung hero of our range, this versatile unit allows you to trigger *anything* from MIDI, via its 13 configurable outputs. Trigger drums, start/stop machines, control lighting - smoke machines. Includes DIN Sync 24 socket, programmable clock output and MIDI Thru. Contact Kenton for further details and advice on using this exciting device.

PRO DCB for Juno-60 & Jupiter 8 £124.90

The polyphonic MIDI-DCB & DCB-MIDI converter. Just plug in and go. Includes aux. output for filter control, with MIDI-syncable 9-waveform LFO, clock output for arpeggiator syncing and MIDI Thru socket.
NB. The Jupiter 8 must have an existing DCB or OP8 socket.

CALL OUR SALES LINE ON
0181 337 0333
12 Tolworth Rise South
Surbiton
Surrey KT5 9NN
United Kingdom

Fax: +44 (0)181 330 1060
Email: sales@kenton.co.uk
Web: http://www.kenton.co.uk

Overseas orders & Trade enquiries are also welcome

Visa

Instant gratification
No setting up – switch on and you're in the driving seat

Accessibilty
Finger-tip MIDI control. Forget your mixer maps and do it all in real-time

More power
Access the hidden depths of your synths and soundcards

Versatility
- Software synth control
- Lighting rig control
- Live stage performance
- Mix control of volumes/pans
- Control of hard disk recorders

...you'll find more and more uses for the Control Freak as you add to your MIDI setup

KENTON electronics

The new *Kenton Control Freak* lets you unlock the full potential of your MIDI synthesisers, expander modules, sound cards and software-based synthesisers

- Tweak hidden parameters such as filter cut-off, resonance, envelope settings and volume – instantly and in real-time.
- The *Kenton Control Freak* sends Sysex, Controllers, NRPNs – in fact *every* type of MIDI message.
- More than 2000 slider and button assignments may be stored, each with a 16-character name which is displayed when in use.
- The *Kenton Control Freak* has 128 user memories and is supplied pre-programmed for many popular models, but is easy to customise with its friendly editing controls.
- Library updates will be downloadable free of charge from the *Kenton* website.
- Supports all major soundcards and sequencers
- Take control - Increase productivity - Save time

Preset profiles for a wide range of popular synthesisers, soundcards & sequencers, including...

Soundblaster AWE	GS/XG
Roland JD-800	Rebirth 338
Roland JV-1080/2080	Yamaha CS1X
Roland Juno-106	Yamaha DX-7
Roland JX-8P	Waldorf Pulse
Korg M1	Waldorf Microwave
Korg Wavestation	Oberheim Matrix 1000

Contact Kenton for the latest list of preset profiles

Features & specifications

- 8 fully-programmable 60mm sliders
- 8 fully-programmable push-buttons
- 128 user memory locations, each capable of storing assignments for every slider and button
- 4 (x2 with shift key) programmable function keys
- 4 edit keys and data entry knob
- Two-line, back-lit LCD display
- MIDI in/Out/Thru sockets
- Two 1/4"external input jacks which may be used with a foot pedal to replace any slider or button. May also be used for CV/Gate to MIDI conversion!
- Intuitive, easy-to-use editing and user-interface
- Pre-programmed with profiles for a wide range of popular synthesisers
- On-board library with capacity for over 5000 individual profiles
- Future library updates *free* from the Kenton website
- Named sliders and buttons for every assignment in every memory location
- Advanced learn mode
- Sliders and buttons may take a parameter from another slider. For instance, if a button is set to send a note-on message, it can take its velocity from another slider's position
- Sliders and buttons may send almost any MIDI message in real time, including multiple messages from the same slider or button
- Buttons may be operated in three modes: momentary, toggle and on/off
- User-selectable global MIDI channel feature which may, if required, override individual program settings
- Built-in MIDI clock generator
- Comprehensive MIDI analyser mode for quick problem identification
- Automatically merges with incoming MIDI data
- Supplied complete with power adapter (UK only)
- Rugged metal construction
- Approx. dimensions (mm): 270 x 160 x 55

QUESTED UD1

MONITORS £1739 (BLACK) £2326 (VENEER)

Quested's new UD1 monitors combine stylish looks with their renowned sound quality. *Trevor Curwen* gets an earful...

Quested monitors are highly regarded and have found their way into many of the world's top recording facilities, including Abbey Road and Hans Zimmer's Los Angeles based Media Ventures where the soundtracks for many of today's top movies are created. With both active and passive monitors in the range, Questeds are renowned for the neutral character delivered by their combination of cone and soft dome drivers, which give wide dispersion and low distortion.

The UD1 represents a change from Quested's usual rectangular and square shaped monitors for the studio environment in that they are designed to be used in locations other than the conventional studio control room.

The impetus to design a monitor of this nature arose from feedback from engineers and other Quested users who, over the years, had been voicing disappointment at the sound of the speakers available for use at home. The general feeling was that hi-fi speakers, while being fine for general leisure listening, were not really up to the task of accurate analytical work ➤

SWING THREE WAYS

The terms bi and tri-wiring, and bi and tri-amping may not be familiar to everyone. These terms represent different ways of connecting up a set of speakers like the UD1s that are designed to be used in this manner.

Basically, the low, mid, and high drivers each have their own set of terminals for connection to an amplifier. In a standard passive mode where one amplifier drives the pair of speakers, one twin cable would go from one of the amplifiers outputs (left or right) to one of the three sets of terminals on its associated speaker, and an internal passive crossover would separate the program frequencies and direct them to the appropriate drive units. It doesn't matter which of the three speaker terminals the twin cable connects to as all three are connected in identical fashion to the other amplifier output.

Bi-wiring is another option for driving the speakers from one amplifier. A pair of twin cables would run from the amplifiers output to the speaker, accessing the low end separately. One twin cable would connect to the bass driver terminal and the other to either the mid or high driver terminal, the link from the bass driver terminal to the others being removed.

Tri-wiring again uses one amplifier but requires the use of a three twin cables from the amplifiers output, one to each terminal. Each set of drivers is driven by its own cable, all links between the three terminals having been removed.

Bi-amping requires the use of two amplifiers and means that two amplifier channels drive the speaker, one channel running the bass driver and the other channel running the mid and high together.

Tri-amping utilises three amplifiers with three amplifier channels driving the speaker. Bass, middle and treble drive units all being driven by their own channel.

➤ like evaluating mixes that had been brought home from the studio. The UD1s have been designed to fill that gap, having not only the trademark Quested audio quality, but also the sort of self-contained style and elegant looks that would not look out of place in any home environment.

Besides the home there is an enormous potential for a monitor of this nature in a large number of different professional environments, dedicated playback rooms, anywhere where accurate playback on a good system is essential or where quality sound and classy-looking speakers will impress clients. One example might be the larger studio where a set of these installed in the recreation room would make a lot of sense, as a studio control room is not always the best environment for playing back work in progress to visiting A&R types.

Overview

A floor standing, passive, three way speaker, which Quested claim is ideal for medium to large listening rooms, the UD1 is based on the already successful H208, containing much the same hardware but configured in a vertical format. A variety of finishes is available including very classy looking mirror-matched veneers in Ash, Cherry, Mahogany, Maple, Oak, and Walnut, as well as a functional and considerably less expensive black. Standing at around four feet high, the UD1 monitors bring to mind Tweedledum and Tweedledee when placed side by side, and look a bit like small coffins on stands. However, these are solidly built, heavy speakers, and the wide base of the integral stand allows them to sit firmly on the floor with no danger of being knocked over, which can often be a problem for conventional hi-fi speakers placed on top of metal stands.

For the bass end, two drivers are used in preference to one to give greater cone area with less excursion, flatter response at very low frequencies, and a better transient response with more efficient cooling. Each of the two custom 200mm (8") bass drivers is mounted in its own chamber designed to minimise standing waves.

The other two speakers sit in their own discrete chamber, de-coupled from unwanted vibrations transmitted from the bass driver. Mid range is handled by a 75mm (3") soft dome speaker and high end by a 28mm (1 1/8") soft dome.

Several wiring configurations are possible with these speakers and there are three pairs of terminals, each corresponding to individual sets of drivers, high, mid and low. Connection is through gold plated binding posts that can take 4mm banana plugs or bare wire. Removable links between the pairs of terminals allow single, bi, or tri-wiring when driven by one amp, and bi-amping and tri-amping with multiple amps.

SPEC SHEET

Bass Drivers:	2 x 200 mm (8")
Mid Range:	1 x 75 mm (3")
Tweeter:	1 x 28 mm (1 1/8")
Maximum SPL:	110 dB
Sensitivity:	92dB at 1 watt at 1 metre
Frequency Response:	45Hz to 20KHz, +2dB
Nominal Impedance:	8Ω

In use

An amplifier with a power output of between 200 and 700 watts is recommended to drive the UD1s, so one of Quested's own AP700 amplifiers seemed an ideal choice and the system was duly connected up. Playing back a variety of material, mainly from CD, it was apparent that the physical design of the UD1s has been well thought out – the tweeters being just around ear level for someone in a comfortable sitting position. These were very revealing speakers giving a detailed presentation of all the music. Stereo imaging was excellent, each instrument having a precisely defined position in the stereo field. Treble frequencies and the upper mid range were sharp and clearly defined and there appeared to be no vices down the rest of the frequency range. A very impressive performer.

Verdict

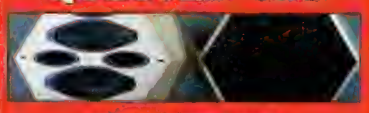
The UD1 is a fine sounding and revealing speaker, perhaps a little unconventional looking – the stealth bomber of loudspeakers with no parallel surfaces and a low radar profile, but there are always the 208s if you want convention.

These speakers are ideal for anyone who wants a studio quality playback system at home and can afford in excess of five grand (including VAT and an appropriate amp). This group might include lottery winners, well-heeled rock stars and successful engineers and producers. In some cases these might not be the answer. Often the idea of taking a mix home is to check it on a system other than that installed in a studio, be it the car stereo, ghetto blaster, or home hi-fi, and a in that scenario a pair of Questeds in the living room could be overkill.

A set of UD1s installed in a home studio is a more viable proposition, but there could be practical difficulties in fitting the floor standing UD1s into that environment. It's more likely that the UD1s will find themselves installed in the premises of companies, corporations and organisations rather than individuals, as such as they will do an excellent job providing quality playbacks for all kinds of clients. TM

More from: Quested Monitoring Systems
Tel: 0181 5662488 Fax: 0181 5662484

QUESTED UD1



WHAT WE LIKE

- Excellent sound quality
- Precise stereo imaging
- Available in a range of finishes

WHAT WE DON'T LIKE

- We can't afford a pair

OVERALL

Elegant and expensive looking, great sounding, floor standing monitors

SERIOUS IN A RADI

NOT JUST ONE SYNTH MODULE.....BUT FIVE!

VL
Sophisticated, computer-based physical modeling simulates the natural tones and resonances of acoustic instruments.

AWM
Yamaha's proprietary system combining sampled waveforms with powerful filters, envelope generators and modulation.

FDSP
Individual note and velocity-dependent effects processing brings voices to life in a unique new form of synthesis.

AN
All the benefits of analog synthesis plus the control, precision and stability of digital technology.

SAMPLING
Sample external sound sources or resample the EX output using up to 72MB of expanded memory.

Also available.....

EXBD1 Individual Output Board
Provides 4 individual outputs bringing the total of outputs to 8.

EXBD2 Digital Output Board
AES/EBU digital audio stereo output with word clock input.

EXBD4 Flash Memory Board
A pair of 4MB boards for 8MB of non-volatile sample storage.

SYNTHESIS CAL RACK

EX5R

Now the monster EX5 synth is available in a quite little rack. Incorporating FIVE different forms of sound generation, including the new voice technologies of FDSP and AN synthesis, EX5R is the most powerful professional synth ever to be crammed into 19". 128 note polyphony plus a 16 track linear sequencer with a tempo resolution of 1/480 per beat, barely hint at the power of this machine. There's a built-in SCSI interface and optional digital and analogue output expansion boards.

Call 01908 369269 quickly for a free demo CD (while stocks last) or visit www.yamaha.co.uk

YAMAHA

Yamaha-Kemble Music (UK) Ltd.

NEW RELEASES

PRAYING FOR THE RAIN ENCHANTED (TWIN)

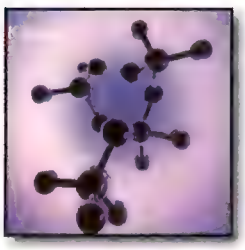
Producer: Domenic and Vince DeCicco
Engineer: Domenic DeCicco
Studio: Bluefire Studio and Twin Arrows, London

To tell you the truth, it's pretty hard to pin Praying For The Rain down. At times they seem rooted in the folkier end of the tribadelic tent, then an accordion that sounds like a synth will blow in before they suddenly come on like an earthy Cocteau Twins. The word 'twins' isn't inappropriate anyway, since the essence of the band is the Italian-Canadian brothers Vince and Domenic DeCicco, here ably supported by a quintet of acoustic persons who constitute the rest of PFTR, plus various session pals. The overall sound shifts from didgeridos that actually suggest synthesizers, to rolling hand-drums and real violins, and, floating over it all, some pure, well-recorded vocals from Domenic DeCicco and one Delagh King. Some might find the trippy lyrics are just a toke too far, but the atmospheric arrangements are so lovingly-crafted, the details so pleasingly rendered, that only yer actual 'ardcore speed-freaks could actively dislike this. A mellow, chilled-out collection that will leave most listeners feeling, well, enchanted. • *Phil Strongman*

Verdict: Worth praying for.....8/10

K–KLASS K–2 (PARLOPHONE)

Producer: K–klass
Engineer: K–klass
Studio: The Bunker, Wrexham



Good old house – that's what we like. And that's exactly what you get with K-2. But then you would, given that K-klass virtually single-handedly introduced the genre to Britain. Pumping anthems are the order of the day here, as are a hand-picked variety of guest vocalists, giving the whole effort a showcase feel. Not that that's in any way a criticism; the featured vocalists have all worked with K-klass before, usually on remixes, for which the band are renowned. 'Burnin', the first single, is a gargantuan house workout, replete with classic house piano and the distinctive dulcet tones of Rachel McFarlane vocalising a hook to die for. But, as ever, the K-klass clan take it all one step further by using live instrumentation, including the most incredibly lush acoustic guitar on 'Hanging (On The Edge Of The World)', a beautifully soulful and evocative ditty that sends shivers down the spine. And despite the numerous collaborations on K2, the whole affair is seamlessly distinctive. Happy birthday, chaps, and here's to many more... • *Michael Stand*

Verdict: The best house in the house.....9/10

THE LEVELLERS ONE WAY OF LIFE, THE BEST OF... (CHINA)

Producer: Andrew Scarth/Levellers
Engineer: Various
Studio: Metway, Brighton/various

The Levellers began in the squats of Brighton a decade ago, although protest folk-punk was by then seemingly dead or dying. However, a skint Jeremy Cunningham tried to sell a guitar to singer Mark Chadwick and though the latter refused to buy it, he did suggest Jesso start a band and the rest, as they say, is hysteria. Well, not quite hysteria, but the squat-rockers have sold over a million discs over the last decade. Hence this set, which might finally see them rivalling the Manic Street Preachers when it comes to media (over)exposure. All the singalong cult numbers are here, like 'Dog Train', 'Hope St.', 'Belaruse' – the last two represented by neat new mixes – as well as the current single, 'Bozos' – the lads strongest, stickest anthem yet despite the extreme lyrics. Although the early efforts still cut through the murk pretty well, the really fascinating thing about this set is hearing Chadwick and company honing their craft over the years. Play them in order and get ready to level up. • *Phil Strongman*

Verdict: Quite a good way of life.....8/10

MILESTONES

P.M. DAWN OF THE HEART, OF THE SOUL AND OF THE CROSS: THE UTOPIAN EXPERIENCE (GEE STREET)

Producer: P.M. Dawn
Engineer: John Sherwood/Scott Harding
Studio: Berwick Street, Calliope (New York)

FUTURE LOOP FOUNDATION CONDITIONS FOR LIVING (PLANET DOG)

Producer: Mark Barrott/Michael Dog/Various
Engineer: Mark Barrott
Studio: Soulspace, Sheffield

In a way it would be unfair to stick this under the moniker drum 'n' bass. Mark Barrott, a.k.a. Future Loop Foundation, is far too adept to stick to formulas. *Conditions For Living* is a wonderful trip through mellow d'n'b pastures, combined with ethnic nuances. 'Karma' is a wildly evocative workout with eerie Arabian-sounding flutes, metallic beats and soaring synths, while the title track has got to be destined for a dancefloor smash award. Infectious vocals, sumptuous double bass and the most gloriously stonking rhythm track cement FLF's reputation as a force to be reckoned with, both live and in the studio. 'Omerta', on the other hand, is scarily dark, and intriguingly weird, with church bells, strange vocal snippets and reversed drums. Bizarre, but highly addictive, as is the bulk of the album. Imagination combined with a solid history of dance music is the key here. And Mark's combination of the two is unsurpassable. If you're remotely into drum 'n' bass, buy it now. • *Nick Serre*

Verdict: Live it up.....8/10

All the major album releases of the month reviewed and rated, our classic sessions spot *Milestones*, plus who's in the studio doing what with whom in *Recording In Progress*...

VARIOUS
ARTISTS FOR THE MASSES
(1500RECORDS/ POLYGRAM)

Producer: Various
Engineer: Various
Studio: Various

Depeche Mode have enjoyed many bountiful years in the business, and their warped form of electronica has built them a wide and dedicated following amongst musicans and non-musicians alike. *Artists For The Masses* is a collection of 16 tracks by acts from The Cure to Deftones, submitting their own twist on what, generally speaking, was twisted in the first place. There are some surprises here, but this only goes to show the depth and breadth of artists that Depeche Mode have touched. There are certainly some fine performances; in particular, Smashing Pumpkins' version of 'Never Let Me Down Again', an outtake from the *Siamese Dream* sessions. Other gems include grunge outfit Failure's interpretation of 'Enjoy the Silence' and the touching 'Somebody' from Veruca Salt. And things take a turn when German noise merchants Rammstein (who normally only sing in their mother tongue) give a dark and sinister performance of 'Stripped' which is truly worthy of commendation. A fine collection of great pop songs. • *Brett Caines*

Verdict: Truly polished performances.....8/10

UNKLE
PSYENCE FICTION
(MO' WAX)

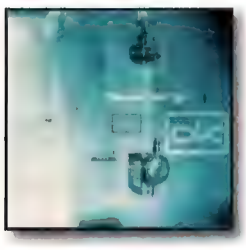
Producer: James Lavelle and DJ Shadow
Engineer: James Lavelle and DJ Shadow
Studio: Various

This collaboration between Mo'Wax label boss James Lavelle and artist DJ Shadow has taken three years to complete, and has stirred up a lot of interest, perhaps due in part to the appearance of artists such as Richard Ashcroft, Thom Yorke and Mike D. Featuring a mix of guitars, synths, samples and beats, and a number of collaborators, *Psyence Fiction* could have ended up being a case of too many cooks, but DJ Shadow pulls it all together in a laid-back manner. From the start, on 'Guns Blazing' (featuring Kool G Rap) and the sample-heavy UNKLE, it draws you into its heavy heart. 'Bloodstain' and 'Unreal' are comparable to Massive Attack or Tricky, with their dark growling synths, wispy guitars and soft vocals. 'Lonely Soul', featuring The Verve's Richard Ashcroft, is one of the album's more moving moments. After that, 'The Knock', featuring Mike D, stands out as the album's bit of light relief. *Psyence Fiction* is a beautiful, delicate album with a running sense of sadness and introspection. Not one to put on before you go clubbing. • *Gabrielle Stackpool*

Verdict: Beautifully introspective.....8/10

TALVIN SINGH
O.K.
(ISLAND)

Producer: Talvin Singh
Studio: Island Studios/Strongroom
Engineer: Various



Tribadelica is the tribey, vibey blend of Western, Indian and Japanese sounds that's blossomed at the green stage of recent Glastonburys, a world of musical paths "between identities, cultures, destinations, languages, a place between the body and digital processes..." Talvin Singh is the first tribadelic on a high profile label. Maybe this is because he's worked with Sun Ra, Courtney Pine and Bjork, or perhaps it's that some of his material is from the drum'n'bassy side of the path. Singh is typically atypical, and 'Traveller' incorporates several different moods in its spacey time of 12 minutes. The mid- tempo 'Mombasstic', after a minute of beautiful synth simplicity, is Donald Byrd jazz-funky with its ever-circling trumpet, while the searing 'Disser// point.mentoo.B' captures the sound of instrumental tragedy with aplomb. Not that it's all space and reflection – 'OK' is very Okinawa on speed, 'Butterfly' kicks like a mule and the 80 seconds of 'Decca' shows a real sense of (Indian) jungle humour. All in all, one helluva debut. • *Phil Strongman*

Verdict: Far, far more than OK.....8/10

FRIDGE
SEVEN'S AND TWELVE'S
(OUTPUT/ SRD)

Producer: Fridge
Engineer: Fridge
Studio: Various

Unsurprisingly, *Seven's and Twelve's* is a collection of Fridge's 7" and 12" releases to date. It's the first time any of the tracks have been available, and it's about bloody time. It also marks Fridge's departure from the Output label, and their move to Go! Beat. Acclaimed for their remix work the trio's own work has never received the wide audience it deserves. Tracks like the hypnotic 15-minute 'Anglepoised' and the raw guitar dance crossover 'EH4-800 Phase Shifter' are, quite simply, genius. Mellow is the name of the game for Fridge, and subtlety is their second name. Forget hypnotherapy tapes, stick Fridge on instead. Things get a little busier on the second CD, opening with the pounding percussion antics of 'Orko', but the vibe is still fundamentally relaxing. 'The Traps' verges on a funky pop sensibility, and kinda brings to mind The Egg, with its silky tones and tight-as-you-like drumming. In all, a perfect accompaniment to a lazy Sunday afternoon. • *Nick Serre*

Verdict: Cool.....8/10

RECORDING IN PROGRESS

Battery studios is host to ex-Communard [redacted] who is recording and mixing tracks with producer Ash Howes (right)

[redacted] are at the Strongroom recording album tracks with producer Ashley Beedle

Roland Orzabal is still self-producing the next [redacted] album at his own Neptune's Kitchen studio

[redacted] are demoing material for a new album at various studios, with Brian Eno once again producing

[redacted] is recording new tracks at Battery studios with Christie Hennessy and Pete Lewis in the production chair

[redacted] are holed up their home studio self-producing tracks for their eagerly-awaited second album

K-klass are producing an album for soul diva [redacted] at their own The Bunker studio in Wales

Ash Howes: in with Jimmy Somerville

[redacted] are at London's Roll Over studios working on their self-produced second album

American jazz singer [redacted] is recording an album at Ridge Farm with producer Tony Mansfield of A-Ha fame

[redacted] are working on albums at Abbey Road with producer Mike Hedges

Dave Anderson is producing [redacted]'s new album at Windmill Lane in Dublin

[redacted] are holed up in their studio with producer Steve Lyon working on an album

Rob Playford's Moving Shadow studio is host to [redacted] whose new album he is producing

[redacted] are at Wood Lands studio recording tracks with producer Mark Wallis

[redacted] are at Hear No Evil studios recording an album, with Sharon Rose producing

Bryan New is with [redacted] at Battery producing mixes

[redacted] are at Church Road Studios with producer Greg Fitzgerald working on a new album for Virgin

K-KLASS

KLASS OF '98

After ten years of remixing, producing, live shows and album releases, top house aficionados K-klass are back with a new album. *Nick Serre* visits the lads at their studio in Wales

After meeting at the infamous Manchester Hacienda in 1988, K-klass (Paul Roberts, Carl Thomas, Russ Morgan, and Andy Williams) made the groundbreaking *Wildlife* EP. It earned them an almost unique reputation for house and techno, a genre that hardly existed in the UK at the time. 1993 saw the release of their first album, the seminal *Universal*, which further cemented their reputation, as well as allowing them to collaborate with the likes of Johnny Marr and Andrew Wetherall. Now, ten years on, with a string of remixes to their name, they've released *K2*. Again, its unabashed house, with a lineup of vocalists that is as diverse as it is impressive, from Rachel McFarlane to Kathy Sledge. The album was recorded in their new studio, The Bunker, a converted nuclear fallout shelter in Wrexham, Wales. It is here that some of the best house composing and remixing takes place...

"We all met at the Hacienda in 1988" reminisces Paul. "We had met before, though. Me and Carl had done some gigs in Chester supporting 808 State. Andy and Carl were already pretty established, but we had no gear at the time – it was basically an SH-101 and a little Tandy mixer."

Andy interjects: "We were very inexperienced at the time. Well, to be honest, we didn't have a fucking clue. We bought a couple of crappy keyboards and a TR–505 drum machine, and were really struggling when it came to getting MIDI working. But we decided to pool our resources and put a track together, and the other guys had a 909, and we stood up and said 'That's the sound we've been looking for!'" Andy is as passionate about the experience as he must have been all those years ago, reaffirming the K-klass spirit.

"It was the sound on all the Detroit techno stuff." Paul continues. "We took about five tracks to [record label] Eastern Bloc in Manchester, just to see what they thought. We didn't have a name for the band or anything, and the tracks were just numbers, but they were really keen, and we put it out on a white label. We were playing a lot of live shows at the time, and used to take along boxloads of stuff to sell, and it went down really well. It wasn't really a decision we made to play live, because, again, we didn't really know what we were doing. We just got offers to play at various clubs, and treated it as a kind of jamming session. That's what it was all about at the time, and in a way it's a real compliment that people didn't even realise we were playing. They assumed it was a DJ."

With these experiences under their collective belt, the lads yearned to start writing and producing tracks with lyrics, and, in typical K-klass style, a few coincidences helped the transition. Andy takes up the story: "We were working with an engineer who said 'I know this girl...', so we hooked up with her. We basically went into the studio with a really rough idea – just a rhythm part, no chords or anything like that, and just thought 'Yeah, let's write a song'. Everyone else was doing it so we thought it would be easy. It was very naive, but it worked well. Eastern Bloc suggested that we do a more commercial remix of it, which we did, and it went down a storm. In fact I was talking to a DJ the other day who had just paid £160 for a copy of it. And it's scratched, so you can't play the first two minutes!"

Despite K-klass' good relationship with Eastern Bloc, their spiralling success warranted a bigger company, and 1991 saw them move to the highly respected DeConstruction label. "Eastern Bloc had been really good to us, to the extent that when we told them we needed a higher level of distribution, they were really cool about it" Paul recalls. "We signed to DeConstruction, because it was the ideal label for us. They were really pushing the boundaries, and they knew exactly where we were coming from, and wanted to maintain that underground ➤

Burnin' (K-klass 12" Klub mix) ***The house pioneers team up with singer Rachel McFarlane (pictured, left) to deliver this old-skool classic***

Now that you've been introduced...

...get to know the 2408 with your favourite audio software.

- The 2408 is the break-through hard disk recording system you've been waiting for. £995 for a core system (24 inputs/outputs), £695 for each 24-channel expansion I/O.
- The 2408 works great with all leading audio software for Mac OS and Windows 95/98 — and it's now shipping for both Mac and PC!
- Enjoy 24 simultaneous inputs/outputs with your favourite Mac and Windows audio software (via ASIO & Wave drivers), including 8 channels of 20-bit analog I/O, 24 channels of ADAT optical & TDIF digital I/O, and stereo S/PDIF I/O (with an extra S/PDIF stereo out for printing stereo mixes to your DAT deck).
- Expandable to 72 active inputs/outputs — use as many as your software & computer allow.
- Play back as many tracks as your audio software allows — take advantage of the 2408's economical driver design for maximum performance.
- 100% compatible with all host-based effects processing in your favourite audio software.
- 16-bit recording at either 44.1 or 48 KHz.
- 20-bit recording "right out of the box" with any software that supports 24-bit recording.
- 24-bit recording with any 24-bit capable audio software via 24-bit hardware (mixer, preamp, FX processor, or other device) that connects digitally to the 2408's ADAT optical or Tascam TDIF connectors.
- Enjoy the lowest host-based latency in the industry with the 2408's adjustable buffer sizes and exclusive Cue Mix™ feature — regardless of which software you use.
- Get started quickly with the 2408's interactive setup wizard (on both Mac OS and Windows).
- Includes AudioDesk™ full-featured sample-accurate workstation software for MacOS with recording, editing, mixing, real-time 32-bit effects processing & sample-accurate sync.

Steinberg CUBASE VST 24 · OPCODE studio vision pro vision dsp · emagic Logic AUDIO · MOTU Digital Performer · cakewalk Pro Audio · SEK'D samplitude · bias peak · SONIC FOUNDRY SOUND FORGE ACID · Syntrillium Cool Edit PRO

19a HIGH STREET
SHEFFORD
BEDFORDSHIRE
SG17 5DD

TEL: 01462 812010
FAX: 01462 814010
Email: musictrack@compuserve.com

musictrack

Mark of the Unicorn, Inc • www.motu.com ©1998 Mark of the Unicorn, Inc. All trademarks are property of their respective holders.

SELECTED KIT LIST

Console
Soundtracs Jade 48-channel automated

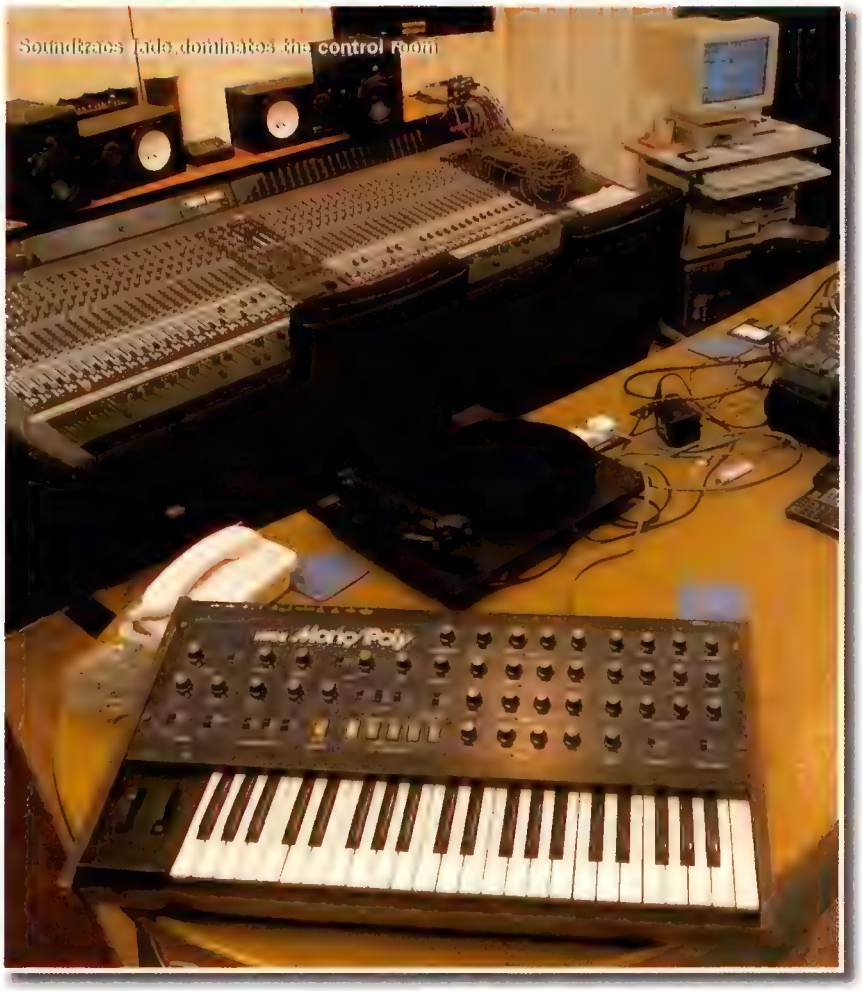
Recording
Alesis ADAT multitrack
Akai DR8 hard disk recorder

Monitoring
Dynaudio M3.5
Dynaudio BM10
Yamaha NS10

Computing
PowerMac with 96Meg running
ProTools 3 with Logic Audio, Cubase VST,
Sound Designer II, and various plug-ins

Processing/Outboard
TC Electronics M5000
Lexicon PCM80, PCM70, LXP1, LXP5
Sony R7
Roland SRV 330 reverb, SDX330 delay,
SDE330 delay x 2
Yamaha SPX900
Focusrite 2 EQ
Tubetech LCA2B compressor
Urei LA22 compressor
DBX 160A, 166A compressors
Drawmer 1960 valve compressor, DL241
compressor
Aphex Compellor and Dominator
Drawmer DS201 and DS404 gates
Neve V Series EQ x5

Synths/Sampling
Alesis Quadrasynth
Akai CD3000, S3200, S1000, S1000PB
Roland SH-101, TB303, Juno 106, JX8P,
R8, JD990, 909, JV2080, JV1080
E-mu Procussion, Vintage Keys, Proteus
MPS
Korg Prophecy, Wavestation, Mono/Poly,
MS20, 700S, 03WR
Novation BassStation Rack
Oberheim Matrix 1000, Xpander


Soundtracs Jade dominates the control room

Some choice bits of synthesis, including the yummy Oberheim Xpander

➤ vibe that we had. We had quite a few singles, and were still messing around, and did a couple of remixes."

Then a dream remix came along which would project the band into the highest echelons of the remixing fraternity. Andy explains:"We were, and still are, big fans of New Order, and the opportunity arrived to do a remix for them. ['World'] They originally said it was to be the third single, and they liked it so much that they asked us to do the second single ['Ruined In a Day'], which they ended up using as the radio mix. That was where we really got our foot in the remixing door.

"It was really a case of getting ourselves taken seriously, which we did. But we were still not technically brilliant, and we were still getting to grips with song structures." And Andy has no qualms in making a self-effacing admission: "People still tell us, rightly, that the chords on the Bobby Brown remix we did ['Two Can Play That Game'] are wrong! But I can't tell the difference. It was a weird one, because we spent days working out how to do a 20bpm tempo drop for the middle section without it being noticeable, and in the end they chopped that part out anyway."

As K-klass gained more and more respect as DJs, the offers came flooding in. But they resisted the temptation to take every offer going. As Paul elaborates, "We started getting offers in from everywhere for remixes, for ridiculous money. It's usually up to the A&R men what gets used. Some of them are really clued-up musically, and that's great. But some others are, quite frankly, dangerous. You sometimes end up thinking 'go away' if you can't deal with that sort of mentality."

Back in the former nuclear bunker that contains K-klass' slightly esoteric, yet enviable collection of gear, Paul remembers a time when a lesser system was in place. "We started off with a bedroom studio, which we quickly outgrew, and then moved into a hired place. But we started getting complaints from the local residents, so we had to move out of there. That was odd, because it was soundproofed, but I think it was a small-town mentality at work that didn't want a studio in the locale."

A major move ensued, which temporarily left K-klass with no home. "We got this place a couple of years ago" Andy recalls, "but we still really haven't had time to do exactly what we want with it because we've been so busy with remixes and the album. The next stage will be to build a live room so we can record vocals and guitars here, and make ourselves a complete studio complex. ➤

172 Derby Road, Nottingham NG7 1LR
http://www.millennium-music.co.uk
www.millennium-music.co.uk

Millennium
Music Software

Specialists in Computer MIDI sequencing, digital recording and hi-tech music production. Mail Order, Helpful service, Academic orders welcome, Computers made to order, Fast delivery into Europe, Complete Studio installations. Over 6 years dedicated service to hi-tech music makers worldwide. Have a look at out Website (above) for more details on our vast product range or fax your requirements to 0115 952 0876 - better still, call us on

0115 955 2200

YAMAHA 01v

The latest in an illustrious line of best-selling digital mixers. The 01V is the ideal digital mixer for project studios, broadcast and live sound, providing enormous flexibility and features. It has 24 input channels, 8 optional digital inputs, 4 assignable analogue outputs, EQ library, dynamics and 2 stereo multi-FX processors. With automated mixing, instant recall, 60mm motorised faders and a large backlit LCD, this mixer is bound to change your life!

£POA

All Behringer and Mackie mixers and effects in stock at the lowest possible UK prices

Package deals available - phone for details

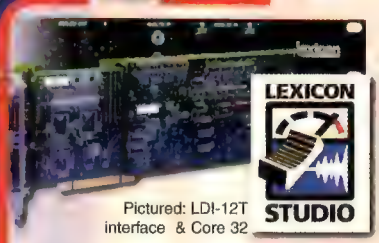
BEHRINGER
MACKIE
dbx

Yamaha A3000

The new version 2 A3000 offers expandability to 128Mb with a whopping 64-note polyphony - load WAV, AIFF and AKAI formats and save as AIFF. There's a new Loop Remix function for recycling your beats, Loop Divide slices up beats and maps them across your keyboard. . 16 filter types, REALTIME pitchshift, ten outputs and SCSI as standard. **£Best UK Deals**

Upgrade your A3000 V1 for just £99 or **FREE** with output expander

Lexicon Studio



Pictured: LDI-12T interface & Core 32

Get the best from Cubase VST, on either platform, with this utterly pro solution. 100% satisfaction guaranteed!

- **Superior Sound** - 24bit audio conversion
- **Lexicon Effects** - *that* world class Lexicon sound
- **System Acceleration** - enhances processing power
- **Synchronisation** - Rock solid sync in Cubase VST

Call to arrange a private demonstration

Millennium have been in the business of specifying and building computers to satisfy the high demands of audio professionals for over six years. We have systems installed in personal and professional recording studios, radio stations, universities, schools and colleges up and down the country. If you're looking to buy a PC for your studio, there's no better place than Millennium.

Our experience in PC audio/MIDI technology is second to none - call our friendly staff today and let us provide the dependable solution to your needs.

- **Pre Configured MIDI/Audio Systems**
- **Expert Advice**
- **Demonstration Studios**
- **Helpful Staff**
- **The Desktop Audio Professionals**

DSP FACTORY

A stunning revolution in computer based digital recording - please call us for the lowdown on this hot new product - there's just not enough room here to do it justice! Full Integration with Cubase VST24 just around the corner. RRP **£549.00**

Cubase Deals

Best UK deals on Cubase VST - *VST24 coming soon!*

Cubase **Gina** £649 Cubase **1212io** £699
Cubase **Layla** £1099 Cubase **Sonorus** £749

MOTU 2408 / VST the **ultimate cubase package**- i/o flexibility and ASIO drivers, just **£1199**

The most powerful synth on the market today - that's what we think anyway. There's just nothing to touch it! **Yamaha EX5** **£POA**

MD8 8 Track Digital Studio
8 track minidisk recorder with 3 band eq / swept mid, 2 aux sends, MIDI sync jog/shuttle wheel, trak meters and copy/paste functions. **Best deals £POA**

Fostex FD4
Incredible all digital multi-tracker from Fostex. There's room for a 2.5" Internal drive and SCSI as standard, mixer and MIDI sync.

Best UK Deals

SW1000XG
Using technology behind the DSP Factory this card will become **the** standard pro PC audio card. 64 note poly/32 channel multitimbral. Buy it from the PC specialists!
RRP **£449.00**

neumann in stock
audio-technica

Special Offer:
C1000s
£129

AKG
RØDE

SELECTED MIXOGRAPHY

Deviate – 'Life'
B*Witched – 'C'est La Vie'
Kinane – 'Business'
Electronic – 'Until The End Of Time'
Sash! – 'Ecuador'
Lisa Stansfield – 'The Real Thing'
Michelle Gayle – 'Do You Know?'
C&C Music Factory – 'Don't Stop The Music'
Kathy Sledge – 'Another Star'
Janet Jackson & Luther Vandross – 'The Best Things In Life Are Free'
Bobby Brown – 'Humpin' Around'; 'Two Can Play That Game'
New Order – 'Ruined In a Day'; 'World'
Blondie – 'Rapture'
Carleen Anderson – 'Apparently Nothing'; 'True Spirit'

➤ That's why we've got a second studio upstairs now as well."

The first major project undertaken at the Bunker was the lads' second full-blown album, *K2*. The project wasn't without its problems, and numerous personnel were employed, but K-klass are more than satisfied with the result. Paul talks through the processes involved: "*K2* has got about six different singers on it, and it's basically people that we've worked with before on remixes – people that we're comfortable with, and who know our style and vice-versa. We deliberately made it into a kind of dance compilation album."

K-klass (L-R): Andy Williams, Paul Roberts, Russ Morgan, Carl Thomas

Andy elaborates: "Some of the tracks we wrote ourselves, and some were collaborations. What we'd like to do with the next one is write the stuff with one specific singer in mind. We've worked with so many different people that we just need to focus on who we would use, and write the tracks to fit their style."

In terms of equipment, the K-klass posse are recent converts to hard disk recording, and Paul has a definite opinion on the whole area: "We spent a lot of money on a ProTools system, and at the time we had Cubase, which we just couldn't get to work with ProTools. A programmer that we had in was using Logic Audio, and it looked like the perfect solution for us. We made the change, and we've ended up using it the same way we were using Cubase. It was so enlightening for us, because seeing this guy using it just made us think 'fucking hell, you can do anything with this!'

"It's always a nice surprise because things are moving on so fast. Just before that we'd been using Cubase on an Atari, and the changes really are staggering. In terms of arrangements it's great. You really can do whatever you want to do spontaneously, and then edit it to fuck. It really gives you so much more creativity, and I really can't understand why so many people are resisting the technology. I guess it's a case of people being set in their ways, but I'm sure they'll come round to it eventually."

"Some A&R men are really clued-up musically, but some others are, quite frankly, dangerous" Paul Roberts

As a parting statement, K-klass offer some words of advice to would-be remixers and producers about the potential pitfalls of the industry: "The main thing we would say to people wanting to get into the business is do your own thing." Andy is adamant, and so is Paul: "When we started, there were only maybe five people in the country doing dance music. In a way we were lucky because we were doing something different, and the key is really to be yourself. We've also been quite lucky in that we haven't encountered any major problems with record companies or A&R people."

"What we would say is hold on to your publishing rights for as long as you can after you've signed a record deal. And don't go just for money when you sign a deal. Go for a record company that feels right, and then you know that they will back you for longer." Wise words indeed, and it doesn't stop there. As Paul adds, "It's also really important to have a good lawyer. Although they're expensive it really pays off in the long term to have a good one who understands the industry. It's also important to come up with ideas yourself for things like promotions and the like, rather than leaving it in the hands of someone else, because then you're in control." Control is an area that K-klass are well on top of, and it looks like they will thrive for at least another ten years. Happy anniversary, chaps! ™

KINGPIN RECORDS

K-klasser Paul has also released *Prohibition*, a tantalising DJ set of some of his favourite tracks...

"Kingpin is really a hobby of mine. It's an effort to get out the music that I'm really into, and it's a combination of local talent and people that I know who I feel need some exposure. There's no money in it, but it's very worthwhile. I really think there's something in the Wrexham water – there are all these people making really cool house music. I mean, we were making house music before most people even knew what it was. I think it's to do with the fact that there's so little going on in the local towns that it forced people to go out further to find something to do. That was certainly the case for me. So the *Prohibition* project is really a personal thing to represent what's going on here, and my own personal tastes. The way I did the album, which was very intentional, was to do it all live on decks, rather than set it all up in ProTools or Logic Audio. That really gave it an organic feel, and also kept me in touch with live DJing, which I do alot of, because it's such a social thing, and it's a very important element to keep yourself in touch with what's going on in the scene."

THE MEGASTORE

FROM HIGH STREET TO SUPERHIGHWAY

Are virtual record shops about to drive their high street counterparts to extinction? In the first part of our in-depth look at music on the internet, Paul Ireson goes for a spot of online retail therapy...

As anyone with a passing familiarity with the internet will agree, those who underestimate its potential to change the way we produce and consume culture do so at their peril. And digital distribution of music via the internet – in which you pay money to download and then play an audio file (to put it at its most simple) is a revolution waiting to happen.

The trouble with revolutions, whether they're technical, cultural, or social, is that you can't be sure quite what will emerge at the end of the process. What you can be certain of is that all manner of relationships between the consumers and producers of music will change – and also that the best way to influence the outcome is to get involved as early as possible. Which is why it's good news for artists and other rights holders that MCPS and PRS have just launched a three-month pilot scheme, MusicTrial.com, to test the waters of digital distribution. But more of that later.

The potential of digital distribution has seized the imagination of some big players in the music industry. George Michael recently commented: "I can't help but believe that music will become one of the first things that the public will buy online simply because there are very few products that can be transported down a telephone line. It's that simple. So if the shopping revolution that we have heard about actually happens, music retail stores will probably be one of its first victims." As a result, the website of his Aegean label (www.aegean.net) is one of the few sites that has offered paid-for downloads of copyright material, enabled by software from Liquid Audio (www.liquidaudio.com).

On the other hand, still more big players, notably major labels and retailers, are wary of something that they perceive as a threat to their positions. But a realisation is growing that denial is not the answer, and that active support of suitable technologies is the way to go. Several companies are now offering technical solutions for online music delivery, and they are finding it easier to interest record companies and rights agencies in their products. Unfortunately it is piracy, in the form of the proliferation of MP3 (MPEG Layer-3 encoded) audio files, that has been as big a factor as any in prompting this interest. "It's the fire under the record companies' asses," notes John Stone, Liquid Audio's Business Development Manager.

Digital distribution

At its simplest, digital distribution means the downloading, via the internet, of some form of digital audio file to your desktop computer in order that you can play it, or perhaps transfer it to another medium such as CD-R. In order for digital distribution to be any kind of rival to other forms of music delivery (CD, cassette, broadcast radio), it must meet several criteria. The quality of the audio must be high – very close to CD-quality – but download times should not be unduly long. There should be a simple means of paying for the music that you download, and the rights of those who have an interest in the music must be protected. All of these areas are problematic, but the advantages of digital distribution are such that they will be solved. It's just a question of when and ➤

➤ by whom.

Few observers expect things to move particularly fast, however. US-based media researchers Jupiter Communications have predicted that while online sales of music in the US (including both online CD sales and digital distribution) will grow to a $1.6 billion industry by 2002, digital distribution will account for only $30m, or 2.2% of the total. The UK's internet development is reckoned to be 18 months to two years behind the US, so it may be a few years before we see the business grow to a significant size over here.

Ironically, one of the pioneers in the field has been the UK's own Cerberus Central Limited, which went online in August 1995. Having realised from the start that dealing properly with copyright would be essential to the success of any digital distribution system, Cerberus (and their founder Ricky Adar) came up with the right software tools, and sought agreements with the PRS and MCPS, the bodies concerned with collecting royalties in the UK.

The system works as follows: the first time you want to buy a song, you visit the Cerberus website, and having selected a title, you send the Cerberus Digital Jukebox your credit card details via Cercure ATM, Cerberus' own credit card transaction software. The Jukebox then creates a unique Cerberus Audio Player for you. Every time you want a a song, you send details of your Player to the Jukebox, and the Jukebox then allows you to download a song which has been encoded for your Player. If anyone obtains a Cerberus Player and illegally publishes .CBR Audio files (the proprietary Cerberus audio file format) on the internet, they can be traced from personal details embedded in their Player. The Player also contains banking details, so that if you give away your Player, you are giving people access to your bank account. A good way to discourage piracy...

There are several other systems in existence now – from AudioSoft and A2B, to the aforementioned Liquid Audio – but the elements remain essentially the same. A software player that runs on your computer accepts only a proprietary audio file format. When you download a song as a file, the server accepts payment in some form, logs the sale, and offers some means of ensuring that anyone who has in interest in the recording (the composer, the performer, and so on) receives correct payment. The audio file format supports both compression, in order to reduce file size and download time, and encryption, such that only a single player is allowed to play the downloaded file.

The right stuff

One of the interesting things about digital distribution is that it makes it very obvious what we pay for when we buy music. When you buy a CD, you may think you're paying for the disc, the case, and the booklet – but what you are actually paying for is the right to play the music that the CD contains. The disc is merely a carrier. When music is distributed via the internet, there's no carrier, and the different nature of the distribution raises questions for the rights agencies.

"If the shopping revolution that we have heard about actually happens, music retail stores will probably be one of its first victims"
George Michael

"There may be many different ways to pay for music," says Gavin Robertson, New Media R&D Manager at MCPS and PRS. "The bottom line is that people buy CDs, a physical product, in the way that they do because it's the only way they can buy music, and the purchasing structure has evolved around that technology. It's very naive of the industry to assume that the purchasing structure will be the same when the technology is fundamentally different." When you buy a CD, you buy the right to listen to it until the end of time. But with a downloaded file? "Other types of uses are possible. Why not pay for a limited number of plays only, or the right to listen to a track for only the next 6 months? If the copyright holders and collection agencies are prepared to offer these types of uses of music, this is what we may be offered in the future."

Reality check

But getting back to the present, what's on offer today? If you have a computer, a modem. and access to the internet, you'll find that you can download a good many songs for free. Record companies are finding that the internet is a great way to promote their artists, and Liquid Audio or A2B Music technology is allowing many American labels to put clips and whole tracks up on their websites.

On the other hand, there are plenty of copyright-busting MP3 files around, mainly on US-based academic servers, it seems. "Whilst the consumer market in digital distribution is very small right now, where digital distribution is happening it's probably mostly university-based, and mostly illegal," agrees Mark Mooradian of Jupiter Communications. This is presumably why so many providers of free web space, such as GeoCities, refuse to allow MP3 files in customer web space – which is a bummer if you're a musician who wants to showcase your own copyright material.

The players

Of the four companies currently leading the way in producing the tools for secure and rights-friendly music delivery via the internet, two are American (Liquid Audio and A2B Music) and two are European (Cerberus and AudioSoft). Only Liquid Audio currently offers both Mac and Windows player software; the other three are Windows-only.

AudioSoft, based in France, offers both broad-band (i.e. cable and satellite) and internet-based distribution of audio through third parties. Cable companies in France, Germany, Switzerland and several other European countries

George Michael: the website of his Aegean label is one of the few to offer paid-for downloads

Imagine a place, you've always dreamed to go to...

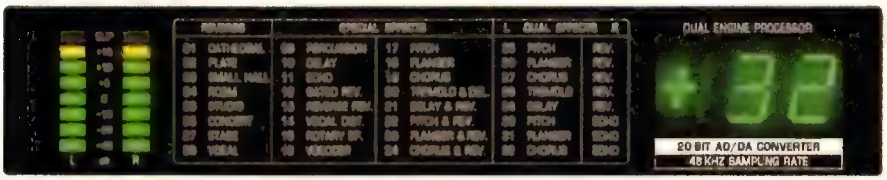
...switch on,
press start, and be ready to lift off...

Virtual reality machines can take you on amazing visual trips that make you feel you're actually there. Our new VIRTUALIZER DSP1000 can take you and your audience virtually to any place you want. It creates rooms, halls and arenas that sound so real, you can almost feel the action.

Providing 32 breathtaking new FX algorithms with up to 5 editable parameters each, our revolutionary DSP1000 processor gives you the power to create unique effects and effect combinations. The VIRTUALIZER's full-blown 20-bit A/D and D/A converters with 64/128x oversampling achieve professional standards and ensure outstanding audio quality.

You can easily edit all parameters and values either from the front panel with the large jog wheel, via MIDI controllers or a future Windows™* editor. Any edits can be stored for instant recall in 100 memories. A big plus for your Project Studio.

The VIRTUALIZER DSP1000.
Takes your sound to any place you can dream of.



Get more information about our entire product range and the Interactive World of BEHRINGER!
Hotline +49 (0) 21 54 / 92 06 66, Internet at http://www.behringer.de

Copyright BEHRINGER 1998

* Windows™ is a trade mark of Mircosoft

RRP £169.00
(inc. VAT)

20-bit AD/DA Converters
Whenever finest details, an ultra-natural sound performance and the lowest possible noise figures are what you aim at, only professional specs will do. That is why we use ultra-high resolution 20-bit AD/DA converters at 64/128 times oversampling.

Internal Power Supply Unit
The internal power supply is a professional feature you want in your studio or live application. We leave wall warts up to our competitors.

24-bit DSP Power
With both parallel and serial processing available from two engines, we are able to offer spinetingling virtual rooms and a fantastic selection that includes all types of chorus and flanging effects, stereo delays and a powerful vocoder.

ISO9000
Manufactured under the ISO9000 management system. This European Certificate is only granted to manufactures that comply with the stringent ISO manufacturing system. Who else has it?

MIDI
Full MIDI capability allows real-time control of all parameters, program selection and memory dumps (bulk transfers to and from the unit).

Virtual Acoustic
Precise mathematical models are used to calculate our unique reverb algorithms. The accuracy of hundreds of parameters used in the physical modeling of real buildings which also includes the important determination of "Early Reflections" ensure ultra-rich, dense and natural sounding reverberation. Compare against any other reverb!

BEHRINGER Quality
High-quality components and exceptionally rugged construction are specified for all our products, so that you can rely on a long life and durability of all BEHRINGER products. Take our word.

Hotline
Any questions? Our Sound Engineers have the answers and solutions. Contact us weekdays 9.30 a.m. through 6.00 p.m. CET.
Phone: +49 (0) 21 54 / 92 06 66
Hotfax: +49 (0) 21 54 / 92 06 65
Hotmail: service@behringer.de

BEHRINGER International GmbH
Hanns-Martin-Schleyer-Straße 36-38
D - 47877 Willich-Münchheide II

Fon: +49 (0) 21 54 / 92 06 0
Fax: +49 (0) 21 54 / 92 06 30

supply their City Music service, which allows customers with a PC and a cable modem to browse and download titles from over 70 record labels – few that you'd recognise, however. But major labels did climb on board for an interactive TV trial that AudioSoft ran towards the end of 1997. A study of the use of the system showed that while most customers looked for big-name artists at first – WEA, Sony and Polygram were among the companies to get involved – 90% of them discovered and bought music as a result of access to online purchasing.

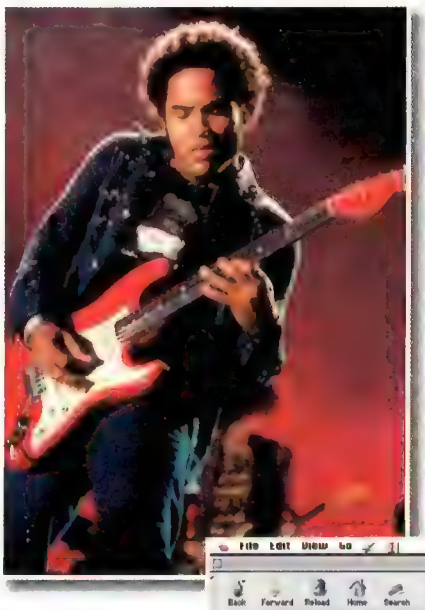
AudioSoft's player software is based on MP3 encoding, and among planned updates are the addition of support for CD burning, so users can burn their own CDs after downloading songs. The system allows, along with other information such as lyrics and copyright information, encoding of the number of copies of a song that may be made – though as with all such copy-inhibit mechanisms, they only work until the user steps outside of the digital signal chain.

AudioSoft also offers City Music (www.citymusic.com) via the internet, though it is concentrating more on broadband channels to consumers, where long download times are not an issue – they are also, significantly, channels that are essentially local, and therefore easier to deal with in terms of national rights agencies.

A2B Music, a subsidiary of AT&T, has developed technology that major labels are using to promote artists such as Bonnie Raitt, Alabama and Tori Amos – indeed, Atlantic Records were keen to use the internet to promote Tori's last album, making a bonus track available as a download only to fans who pre-ordered the CD via the web. A recent visit to the A2B site (www.a2bmusic.com) revealed another twist on mixed media marketing – a special CD-ROM available only with a limited edition of Bonnie Raitt's latest CD, the CD-ROM containing bonus tracks that can only be played with the A2B Music system.

A2B's approach seems to be to get involved with the labels, and wait for the time when the commercial side of music distribution takes off. Although you won't notice it if you download one of the free tracks on, or linked to, A2B's site, the

Lenny Kravitz: you don't have to go down the record shop to get his tunes



Cerberus: pioneering online music in the UK

"[Piracy] is the fire under the record companies' asses"
John Stone, Liquid Audio

A2B system includes a proprietary PolicyMaker element that can control the use of the music in accordance with whatever licensing terms may apply – one-time play, song rental or purchase are all possible. The AT&T compression algorithms allow up to 20:1 compression without perceptual loss of quality, allowing a 5-minute song to be downloaded over a 28.8k modem in 16 minutes.

Which brings us to California-based Liquid Audio (www.liquidaudio.com), formed in 1996 mainly by ex-music and audio industry professionals, and the partner in the aforementioned MusicTrial.com scheme launched by MCPS and PRS at the start of September. Their player software supports streaming preview audio as well as download of CD-quality tracks (Dolby's AC3 compression technology is employed), and with the other elements of the Liquid system, provides full rights reporting.

Launching the scheme, Mark Isherwood, Director of New Technology at the MCPS-PRS Alliance, commented: "Until now, rights organisations' dealings with the new technologies have been focused on preventing the use of unlicensed music without addressing the need to find a user-friendly licensing solution for those wishing to operate legally. This trial is our attempt to do just that, and by working with Liquid Audio – whose views on copyright protection remain consistent with our own – we will be producing valuable information which will enable us to continue developing an online licensing system. We are demonstrating how music copyright holders can continue to receive royalty payments for their work in an electronic trading environment, thus allowing them to take full advantage of the new opportunities of the Digital Age."

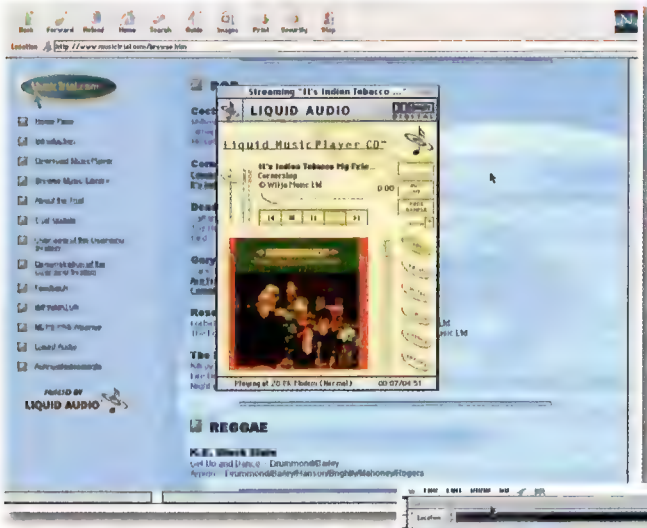
Until the end of November, anyone, anywhere in the world can download tracks made available by MCPS and PRS members – it's not a huge selection, but does include offerings from Cornershop and the Cocteau Twins, and a few tracks from Ninja Tunes (ex-Coldcut Jonathan More and Matt Black's label), and Gary Numan, amongst others. For this trial, the downloads are free, and this is how the system works:

As with the Cerberus system, you first need to download the proprietary Liquid Player software (Mac or Windows). But before you download any tracks, you first have to register your player with the Liquid Operations Centre – via the web, of course. Once the player is registered, it can receive and decrypt Liquid Audio files, and your player is uniquely identified and identifiable.

Each time you download a track (and, in a commercial operation, pay for it), you are issued with a Music Passport, a digital key that unlocks the encrypted audio file and allows it to be played by the Liquid player, and also allows the player to burn a track to CD.

Pinocchio's nose

Everyone agrees that the market for downloaded music is, at the moment, tiny. The question is: when will it grow? Well, in the first place, we need to take a good few steps beyond 28.8k modems before download times become really tolerable – especially when we have to pay for local phone calls, unlike our Stateside



The MusicTrial.com scheme is testing the waters of digital distribution

counterparts. But that will happen. Record companies and collection societies need to get on board – that is happening.

In order for all the buying to actually happen, we will need to get a lot more comfortable with spending money on the internet. While many people will quite happily send their credit card details via the web – it's not really any riskier than giving it to a strange waiter, after all – many more will not. Especially if small-value transactions are required, as will be the case if people are downloading single tracks rather than albums, it may take the widespread acceptance of e-cash to enable digital distribution to take off.

There is yet another factor, however: most of us spend enough time sitting in front of our computers without having to sit at them to listen to music as well, so we need some means of taking the music away from our computers. John Stone, Liquid Audio's Manager of Business Development, agrees that the computer is a poor entertainment centre, but suggests that when the standard PC comes with an internal CD-R or DVD-RAM drive, this will be less of an issue – you'll simply download a song and burn it to CD. "We're also talking to multiple manufacturers of handheld devices – whether they're flash memory, MiniDisc, DAT or whatever, isn't really important," he says. "What is important is that people like to have and hold something, and we will be announcing partnerships with manufacturers of portable players in the next few months."

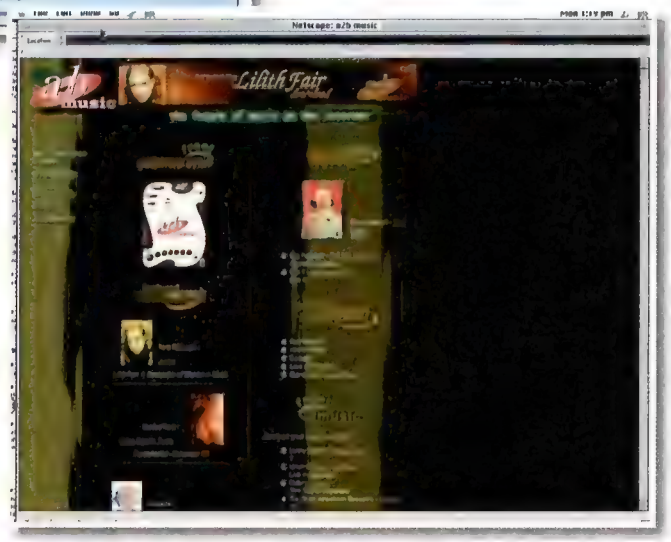
David Johnson, Commercial Director of Virgin Net, who are also supporting MusicTrial, sees the revolution coming sooner rather than later, though he sees no danger to high street music retailers. "I don't think we're going to see them close down. I think people will still want to go and look around, go to a store and have the physical experience, though they may buy stuff online. At the same time, I do think we'll see a many-fold expansion of online sales in the next year or two. We haven't seen electronic commerce take off in the way people were expecting, but people are still expecting it to happen. Music – CDs – are one of the things that sell well over the internet already, so the infrastructure is already there.

"On-line distribution of music product is happening already. The fact is that a lot of musicians and rights societies are trying to stop it because they don't have control over it and the payments, but I believe these issues will be resolved – and that they have to be resolved, because it's happening already in an unauthorised manner, and it will continue to happen. So everyone has to get

"People buy CDs, a physical product, in the way that they do because it's the only way they can buy music"
Gavin Robertson, MCPS/PRS

their act together. That's why we're working with the Music Alliance on this."

But sounding a more pessimistic note is Ricky Adar, founder of the pioneering Cerberus. "At the moment we are not having many songs purchased through our website," he admits, and as a result the company have recently concentrated on developing Virtual Record Store Kiosks – kiosks that let you burn your own compilation CDs – for installation in Levi Strauss stores across Europe. "That's growing, and starting to make money."



A2B: waiting for the commercial side of digital distribution to take off

But the advantages of digital distribution will make it a reality – what kind of a reality remains to be seen. As Gavin Robertson of the Music Alliance puts it: "I really don't know what it'll be like in five or ten years' time, and anyone who says they do is kidding themselves. The one thing that *is* clear is that the current ways of receiving music – within a premises as background music, from a broadcast, or from physical media – are going to be immensely expanded through all kinds of technologies. Perhaps through agent technologies that make decisions on your behalf – in the future, software could recommend music, or just choose stuff for you, on the basis of what you choose to listen to from your current selection. Is that replacing a jukebox, or a radio station?"

If we download single tracks rather than whole albums, perhaps recording contracts will change to reflect this. The record company of the future might be all about marketing and A&R – which is all that's left after you take away production and distribution. More, smaller record companies? More music? More power to the creators? Or more power to those who are already empowered? We'll be finding out in a few years' time. TM

That's how the big guns are doing it. Next month we'll look at how *you* can use the net to take your own music to the world.

SITES OF INTEREST

MusicTrial: www.musictrial.com
Cerberus Digital Jukebox: www.cdj.co.uk
Aegean Net: www.aegean.net
A2B Music - The Sound of AT&T: www.a2bmusic.com
Jupiter Communications: www.jup.com
Liquid Audio: www.liquidaudio.com
AudioSoft: www.audiosoft.com
The DJ Internet Music Service: www.thedj.com
Virgin Net: www.virgin.net

MANDALA

Dave Goodman the "Phil Spector of the blank generation"

Phil Strongman **visits the second home of the Sex Pistols' engineer Dave Goodman, and finds a cosy but capable set-up**

Dave Goodman's name initially came to the industry's attention as the live mixer who became the Sex Pistols' first real producer – he was labelled (or should that be libelled?) the 'Phil Spector of the blank generation'. He'd been involved in recording sound since 1967, though, and Mandala Studios, established some two decades later, is a dream come true for him.

Nestling on Gipsy Hill in the deep south of London, Mandala is a typical 'vibe' studio – cosy but capable – where vintage valve collectors' items, new hard disks and a dazzling array of world music instruments are all linked together by a producer's hard-won experience.

Although there are two live rooms (a 100ft one in the basement and another, 250ft, in the soundproof attic) and some of Roland's finest digital recorders, Goodman is the first to admit that it is partly his own personal reputation that has brought the likes of Afrika Bambaata, Hawkwind, Gong's Daevid Allen and Spandau Ballet's Tony Hadley knocking at Mandala's door. It is a reputation built on sheer versatility – while still in his 20's he played bass on soul hits for The Fantastics, toured with The Drifters and Nicky Thomas, introduced the 'Shaft' theme to Europe, started a PA hire firm and produced psychedelic jazz-funk albums for his own group Polecat.

But having finally broken through with hits for 'new wavers' like the Sex Pistols and the Mobiles, Gooders then surprised most pundits by ignoring guitar groups for a while and diversifying. The classic *Street Level* reggae album for The Tribesman followed, as well as solo tracks that could best be described as early ambient. After collating various Pistols collections and doing an album with teenybopper Lena Zavaroni ("it was just before her

You'll find a Korg classic...

RECENT CLIENTS

Afrika Bambaata
Tony Hadley
Space Goats
Haroki Okano & Tenkoo Orchestra
HIV Music Project 'Sex, Drugs & Rock & Roll' featuring members of Prodigy, Big Country, X-Ray Spex

... and other items of similar antiquity

breakdown and she was skint, so we claimed Musicians Union fees for a 14 piece orchestra... of course it was all just me bouncing down!"), Goodman established Mandala in 1986, building the 16-track into the basement of his five-storey Victorian house.

"I knew the sound I wanted from the off, and I already had a lot of the gear – the CAD Cardioid mic is a Neumann 87 clone that does voices really well. I've got some Shure 58's and some 58 clones, but the best mic, aside from the CAD, is a cheap dynamic I got in Radio Shack for a tenner back in 1972. It still sounds tight, even now. Back then every other drummer had a Neumann at home, under the bed, virtually unused – they'd nicked 'em without knowing you needed a separate power supply!

"The Quad 202 pre-amp warms everything beautifully, while the transistorized 303 is the same amp I used to power the PA tweeters when the Sex Pistols played live. Both of them still sound great over 30 years later and a valve still hasn't blown on the 202. The Seck mixer is just back-up now, or used for sub-mixing, but it's surprisingly clean and really reliable. That Seck came from Wally, the fifth Pistol... he died last year just when it looked like he was gonna get tens of thousands of pounds worth of unpaid royalties. Typical, isn't it?"

Goodman himself is still in dispute with Virgin over money he feels is owed him, as well as the fact his credit has now been omitted from the *Spunk - This Is Crap* Pistols CD. But while the lawyers consult, the man himself has been kept busy with a stream of old and new studio clients. Some of the latter, like the Space Goats, cemented their relationship with him at Glastonbury where DG has run the solar-powered stage for the last six years.

It was at the latter that he recorded some of the crystal-clear *Green Futures - Glastonbury* album for Global Tribe records. "It is amazing the clarity you do get with the right amount of solar power," he says. "You don't need mains filters or any of that because you're not relying on dirty mains power. It's very green and rainbow tribe and all that, and so it fitted in perfectly with recording tribadelic people like the Space Goats and Hiroki Okano at Glastonbury. Of course, by the time I recorded those, in 1997, I'd gone digital with my Roland VS-880s, and that helped too.

"I then mixed them back at the studio, again using the 880s. They really are wonderful. Fast too – that's useful if you're laying down tracks and you've got a member of the Prodigy who's gotta leave in three hours to go on a world tour. With the 880s you've also got hundreds of virtual tracks, and all of their built-in effects are good too. The reverbs, delays and flangers are all top-notch and even the rotary speaker is pretty damn hot – and that's speaking as someone who has actually heard quite a few Leslie speakers being played live by experts."

Rare noises are something that Mandala isn't short of. As

Anyone for a round of 'Speak Softly...'?

SELECTED KIT LIST

Atari Falcon
Pentium PC with Cubase VST
Roland VS-880 HD 8-track recorder x 2
Fostex R8 reel-to-reel 8-track recorder
Seck 12:8:2 mixing desk
Spirit by Soundcraft Folio FX16
dbx 563X 'The Silencer' stereo slave x 2

Quad 202 stereo valve pre-amp
Quad 303 solid-state power amp
Neat Acoustics' Critique monitors
Tannoy PBM8II monitors

CAD cardioid mic
Beyer 201 mic
Shure 58 dynamic x 3

Roland MC303 Groovebox
Yamaha MU-902 tone generator
Korg MS20 monosynth
Roland PC200 Mk II MIDI keyboard
Theremin
Dimension Beam

Sony DTC-A6 DAT
Casio DA7 DAT
JVC TD-X335 HX cassette

World music instruments...

...and other weird and wonderful items...

...all add to Mandala's loveable image

Loungecore dance/reggae combo Ciao Manhattan! limber up for a session

➤ well as the amazing sci-fi-sounding Theremin and its modern equivalent, the Dimension Beam, the studio has access to many weird and wonderful instruments, including mandolas, mandolins, bouzokis, balalikas, tablas, tampoulas, bodhrans, djembes, Japanese kotos and hammered dulcimers. And that's not forgetting classic analogue synths like a trusty Korg MS20.

Many of these get played by Goodman's own irregular band, New Age Radio (essentially himself, his partner ex-cabaret star Kathy Manuel, and Aussie keyboard queen Sandy Dunn) and issued, like the Space Goats, on the studio's own label. In fact, several acts have come in to finish a track or cut a few demos and ended up being signed to Mandala Records. But, as Goodman admits, it doesn't often happen. "The talent's still out there but we sometimes don't have the time or money to develop it... we have to ration our support. Being small is beautiful but it does mean you miss out occasionally. You can't sign every new act you fancy the sound of."

New acts, old acts and third-world percussion don't mean that much if you can't hear them, and the final end of the Mandala system, the monitoring, is taken care of by Tannoys and by some refugees from the hi-fi world, Neat's Critique speakers (as reviewed in issue 54). Neats remain, apparently, the only speakers in the world that are designed by ear, with impedance checks being the only 'technical tests' undertaken for a large portion of the development time.

"The Critiques are really melodic" says Goodman. "Technically, I think the Tannoys are probably their equal in terms of top end, bass power and at low levels, but there's something about the mids on the Critiques that makes them easy to listen to. Listener fatigue is the last thing you want with a monitor, and the Neats avoid that. Stereo effects and separation are sometimes difficult to grasp with nearfield speakers, but they hold them well."

Taking into account all of the above, it wouldn't be surprising if Mandala charged above its lovable image. But no, from around £15 per hour is the rate you have to pay to work with one of the UK's most colourful and dynamic producers.

"It's not Abbey Road or Wessex or Trident – and I should know, I've worked in places like that – but Mandala's strength is its accessibility" says Dave. "We could charge a higher rate, but then we'd be empty more of the time and we'd be much more dependent on bigger record labels. What's the point in that? The vibe's more important." Who could argue with that? TM

More from: Mandala, PO Box 344, London SE19 1EQ Tel: 0181 761 3288 Fax: 0181 766 7009 email: www.mandala.mcmail.com

National
music
Show '98
the ultimate music experience
Friday Nov 27th
10am - 6pm
Saturday Nov 28th
10am - 6pm
Sunday Nov 29th
10am - 5pm
Wembley
Exhibition Centre
In association with
THE Mix

In association with

THE Mix

National music Show '98

- **Friday Nov 27th**
  10am - 6pm
- **Saturday Nov 28th**
  10am - 6pm
- **Sunday Nov 29th**
  10am - 5pm
- **Wembley**
  Exhibition Centre

the ultimate music experience

- See the **stars** on the Live Stage including:
- Saturday **Sasha**
- Sunday **James Taylor Quartet**
- Loads of **equipment** to see, try and buy. It's your chance to shop in the UK's biggest music shop
- Future Stage – get **interactive** with all the features
- **DJ workshop** tips on mixing, demos and all your questions answered
- Q&A sessions with the people that **influence** you in the music and recording industry

Check out the next page for Live stage and Features line-up

Call the ticket hotline on

01369 708010

Please quote this reference number when calling: MIX4

National music Show '98

the ultimate music experience

In association with THE Mix

19,850 people attended the 1997 **National Music Show**. This year it's going to be **bigger**, **better** and **louder**. With all the top manufacturers exhibiting, it's your chance to shop in the **UK's biggest and most exciting music shop** and to be entertained by some of the top musicians in the industry.

Whatever type of music you're into, The Live Stage has it for you

➤ Friday - Education day

11.00 am Young Guitarist Of The Year, in association with Guitarist
The Academy of Contemporary Music's showcase band, in association with
1.15 pm The Mix
3.30 pm Bassist and Rhythm
5.10 pm Guitarist, Total Guitar and Guitar Techniques

➤ Saturday

11.00 am Acoustic Guitarist Of The Year, in association with Guitarist
12.15 pm ACM Band
1.45 pm Band - TOP SECRET
3.30 pm Albert Lee and Hogan's Heroes
5.10 pm Paul Kodish & Cliff Hewitt - Appollo 440 & DJ Harry K

➤ Sunday

11.00 am Guitarist Of The Year, in association with Guitarist
12.30 pm Sasha
2.15 pm James Taylor Quartet
4.10 pm Andy Gangadeen

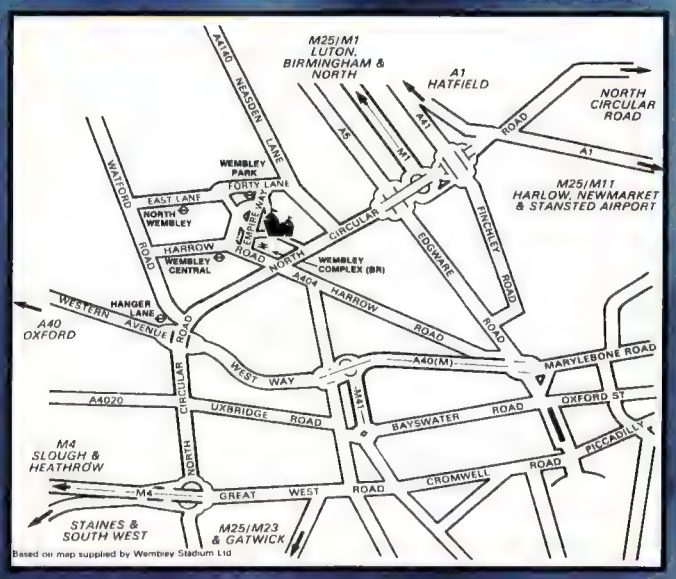
Get interactive at The Future Stage with entertaining and interactive features every day

Area 51 Demo - Making music with computers.
In the Bin - Is it a win or is it in the bin? Have your demos judged by a panel of experts in association with The Mix.
DJ Workshop - Tips on mixing, demos and all your questions answered with top DJ Tom Harding in association with Future Music.
Bass and Guitar master classes - With Bassist, Guitarist and the ACM.
Future Band Jam - Enjoy the Editors and team of your favourite magazine jamming.
DR Roberts Guitar Clinic - Guitar maintenance and getting the most out of your gear in association with Guitarist.

➤ Plus

Future Magazine Shop - Want to subscribe? After a back issue or just want to have a chat with the magazine teams? The Future Mag shop has it all.
Rhythm Seminar Room - If you're into drums this is the place for you in association with Rhythm magazine.

➤ Directions



➤ Underground

Bakerloo line to Wembley Central Station. 10 minutes walk to Wembley Complex or catch buses 83, 92, 182, 224 or 224.

Metropolitan and Jubilee lines to Wembley Park Station. 7 minutes walk to the show or catch buses 83 or 92.

➤ Rail (tel: 0345 484950)

Wembley Stadium Station situated next to Wembley Complex provides a direct British Rail link to Central London and the Midlands.
Wembley Central Station provides a direct link to Network South East.

➤ Bus

Central London to Wembley Complex catch the no. 18.

➤ By Road

From the M1, M4, M25 and M40 take the North circular Road (A406) and follow the signs to the complex.

➤ Parking

There's plenty of on-site parking at Wembley Complex (£7 a day). Marshals direct you on arrival.

Call the ticket hotline on 01369 708010

Please quote this reference number when calling: FM3 or fill in the form below

Ticket **booking** form

One day pass
Please state which day you would like to attend
☐ Fri 27th Nov ☐ Sat 28th Nov ☐ Sun 29th Nov

Two day pass
Please state which two days you would like to attend
☐ Fri 27th Nov ☐ Sat 28th Nov ☐ Sun 29th Nov

Please state how many tickets you **require**

	On the door	Advance	Subscribers	Total
Adults	£8.00	£6.50	£6.00	
Child	£5.00	£3.50	£3.00	
Cons	£7.00	£5.50	£5.00	
Adult 2 day ticket	£14.00	£12.00	£11.50	

50p Booking fee per order

please quote your Q number. _____

Please state how you would like to pay

Cheque
(please make payable to The National Music Show)

Visa/ Mastercard
Card no.

☐☐☐☐ ☐☐☐☐
☐☐☐☐ ☐☐☐☐

Expiry date: _____

Please complete your details in **block capitals**

Mr/Mrs/Miss/Ms _____

Address _____

_____

_____ postcode _____

Daytime tel. No. _____

signature _____

Return the form and payment to: The National Music Show, PO Box 9, Dunoon, Argyll, PA23 8PQ
Tick here if you do not wish to receive direct mail from other companies ☐ **CODE:MIX4**

Ticket **booking** form

AMIGA TOOLBOX

NEWS

News, advice, and software for Amiga users, compiled by John Kennedy

The Amiga event of the year happens in Germany this November

Achtung! Das Amiga show

The next big Amiga event is the Cologne Computer '98 show, from 13-15th of November. The Amiga has always had an extremely strong following in Germany, and the Cologne show is always looked after by Amiga champion Petro Tyschtschenko, Managing Director of Amiga International. Traditionally, European Amiga developers like to unveil their new products at this show. Even if you can't attend in person, there will be internet events to watch out for, and of course, a lot of badly-needed goodwill and publicity. Amiga International will be in hall 11.2, at stands D42/E43.

Software for your Amiga is on the CD-ROM cover disc – see pages 8 and 9 for details

New hardware

A few years ago, talk in Amiga hardware circles was dominated by the promise of DSPs: Digital Signal Processors. Sadly, despite hints at new models of Amiga appearing with DSPs onboard, nothing happened – that is, until now.

The name Jens Schonfeld might not mean anything to you, but you probably have used some of his work: Buddha, Catweasle, IDE-Fix and Graffiti are some of the most useful and innovative Amiga products to appear in the last few years. Now the list is joined by Atlantis – essentially a DSP in a box.

Cleverly, the system connects directly to the external floppy disk drive. Inside is a Motorola 56002 DSP operating at 80MHz. The DSP can be programmed to perform all manner of tricks: real time MP1, MP2 or MP3 decoding, for example, and audio effects such as high quality echo, flanging and surround-sound processing. All the work is done by the DSP, so an ultra-fast Amiga isn't required.

The prototype has already been shown at the World of Amiga show in London, and we'll bring you the full details when the system to ready to buy. In the meantime, find out more from:
http://www.jschoenfeld.com/eindex.html

Using PC hardware

Tired of waiting for all the lovely Amiga music hardware to appear? Here's an interesting idea – why not make use of PC-compatible hardware. It's not as daft as it sounds, and it won't necessarily mean you having to sell your soul to the dark side.

The easiest option is to use a Yamaha MU10XG, which is essentially a DB50XG daughterboard card in a box. It's an excellent XG MIDI synthesizer, ideal for general-purpose and dance tracks. Best of all, it doesn't even need a MIDI interface. In common with many Yamaha synthesizers, a special "Host" mode means that a simple serial lead connection does the trick. You can then use the MIDI ports on the Yamaha box to connect to more MIDI kit.

More exotically, if you happen to have a 'big box' Amiga with PC-style ISA cards, you might find you have all you need to use some PC soundcards. Well, almost: you'll need a Bridgeboard (Commodore design which consists of a IBM-compatible PC on a single card. Usually 286-based,

Mythical Lost City or exciting Amiga hardware? You decide...

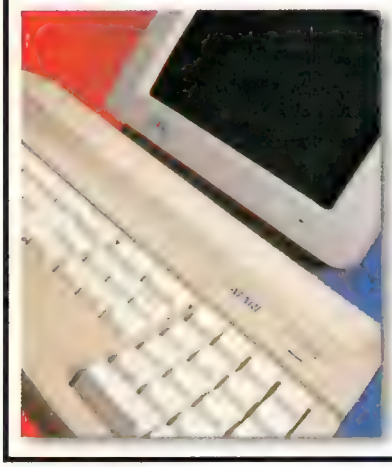
these were an interesting, although expensive, concept). Using a Bridgeboard you can shove a cheap PC soundcard into a slot. Into the soundcard you can then connect a daughterboard such as the aforementioned Yamaha DB50XG. End result: a lovely synthesizer living inside your A2000, A3000 or A4000. More from:
http://209.82.93.153/blue/mpu.html.

One more point to consider: there was a time when even jolly expensive PC laptops didn't have sound, and instead anyone wanting to play some tunes needed to buy a PCMCIA soundcard. Roland even went to the bother of making a SoundCanvas card, which was perhaps the definitive General MIDI module. Now, no promises, but it might just be possible to hack together some kind of driver to make use of a soundcard like this on an Amiga A1200. If anyone knows of this being done, please get in touch!

Into the Sunrize

Two of the most popular soundcards to appear for the Amiga were the pair of Zorro II cards from Sunrize Industries. Sunrize were one of the very first companies to produce Amiga samplers, and their 16 cards were among the first direct-to-disk recorders on the market for any platform. These cards are still much sought-after, and recently a new website appeared offering support, development tools and patches for Studio 16, the sound recording software which came with them. If you have one of these cards, you would be mad to part with it – and mad not to visit **http://www.youngmonkey.ca/hands/files/Sunrize/index.html**.

ATARI TOOLBOX

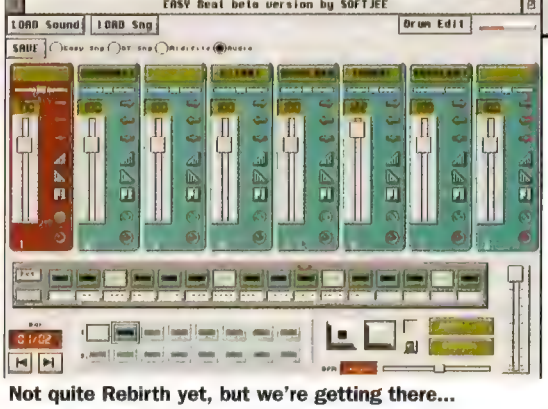


News, advice, and software for Atari users, compiled by Danny McAleer

NEWS

Softjee-z, more software...

Prolific software developers Softjee have recently announced the imminent release of two more programs, adding to their already-expansive range. In the past, seeing Rebirth on the PC and Mac has probably turned many an Atari user more than a subtle shade of green. But this year has already seen the release of one TR909 emulator in the form of EC-909 (which is currently undergoing a major upgrade), and now there's Easy Beat!

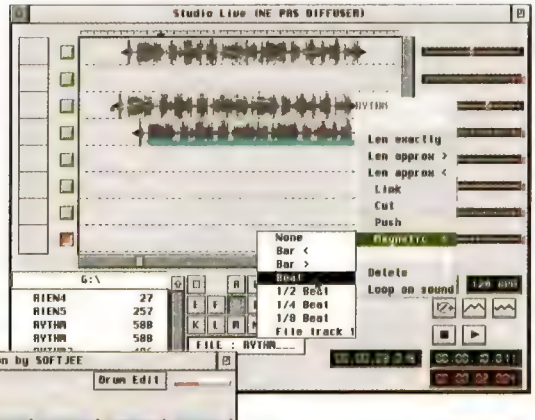


Not quite Rebirth yet, but we're getting there...

Easy Beat is an impressive-looking drum sequencer that permits up to eight tracks of CD-quality output, has a capacity of 16 patterns, each of which can be up to 16 bars in length (definitely enough space for a whole song there, then...), and plenty of cut and paste tools for editing patterns easily. It also features effects such as distortion, reverb, and echo, and pan, pitch and volume settings for each drum. Like EC-909, Easy Beat comes preset with a Roland TR-909 drum kit, and can also be re-programmed to use your own samples.

The second program, Devil Studio, is an audio sequencer capable of playing up to eight tracks simultaneously, but with 64 virtual tracks for arranging compositions. The concept is fairly simple: drop samples onto a position on a track, and play them! Of course there's a little more to it than that; samples can be moved, re-sized, looped, and edited (there's even an envelope shaper), and tracks can be panned and have their global volumes altered too.

Devil Studio makes sample sequencing as damn-near fun as it gets



In the current release there are no provisions for MIDI, but Softjee are already planning an update where it will be possible to drop in MIDI files in the same way as you would an audio file.

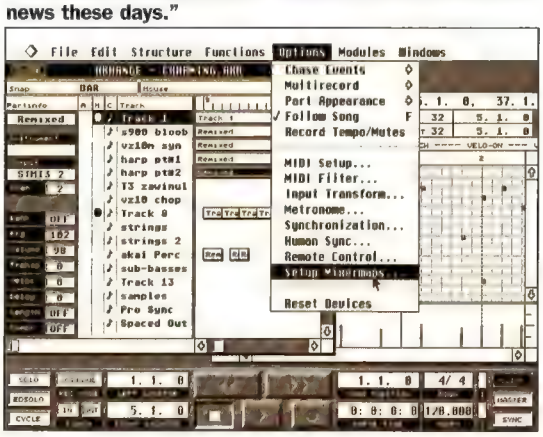
There has also been some mention of development of an external clock interface for the Falcon, just like the JAM and Soundpool FDI, to allow playback of digital audio at 44.1 and 48KHz (software switchable). The 'Newclock' is expected to cost around 340FF (about £35), and is about as small as the clock adaptor supplied with Cubase Audio (44 x 40 x 16mm).

As with all of Softjee's other releases, Easy Beat and Devil Studio are Falcon-only. For additional information, visit their web page at http://wwwperso.hol.fr/~softjee/ or email: softjee@hol.fr. For prices and ordering in the UK, contact **Titan Designs, 6 Witherford Way, Selly Oak, Birmingham, B29 4AX Tel: 0121 693 6669 Fax: 0121 414 1630 Email: sales@titan-bss.co.uk Web: www.titan-bss.co.uk.**

Cheap, cheap, cheap...

Steinberg may be as supportive of the Atari market as a paper bag is to a litre of water, but it seems as if now is the best time to be jumping onto the Cubase boat. Over the summer, System Solutions had a very tempting offer on version three, but if you missed that, you'll not be sorry to hear that Keychange have now secured a healthy supply themselves, and are selling the software for a not-so-finite period at £149. To promote the offer, until 30 November 1998 Keychange will also be supplying a free 2Mbyte upgrade (two 1Mbyte SIMMs suitable for the STE, or STFM already fitted with a Marpet Xtra RAM board) with every copy of Cubase sold. Since ideally, 2Mb is the minimum amount of memory needed for version three to load all the modules and have a comfortably-sized song or two in memory, this is indeed an opportunity not to be passed up. **More from: Keychange Music Services Tel: 01925 266120 Email: barrie@atamusic.u-net.com. Web: http://www.atamusic.u-net.com**

"Tsk! Such an exhibitionist... this one's never out of the news these days."

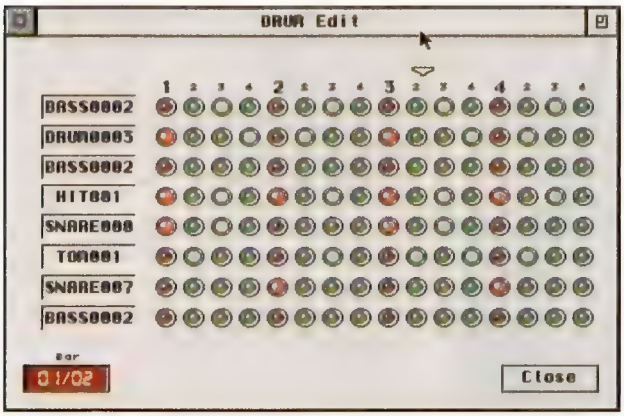


Atari software is on the cover CD: check pages 8 and 9 for full details

The bigger picture

Although the Falcon has a pleasant enough screen size with a healthy palette of colours, compared to the resolutions of other platforms, it's like trying to watch a wide-screen film on a standard TV set. Virtual screen drivers like Blow Up and Videlity compensate for this, but with a loss of processing speed. Ideally, it's best to have a bit of memory, and a load of chips just to handle the video, whilst the computer ambles along doing the really important things.

With this in mind, and with the only other option being a Nova graphics adaptor (which will only work with 4Mb machines), Titan Designs and Istari Software in Sweden are currently collaborating on a new PCI-graphics card adaptor for the Falcon. The Eclipse PCI adaptor will actually fit inside a standard Falcon or MK-X case; although the graphics card itself is housed in a separate box, it's neatly designed so that it actually plugs onto the adaptor through the top of the Falcon. (Of course, if you've got a re-cased machine with plenty of space, the external box isn't necessary.) The adaptor itself connects to the Falcon's direct processor slot, and requires no soldering to install.



LED-overload in Easy Beat's drum grid

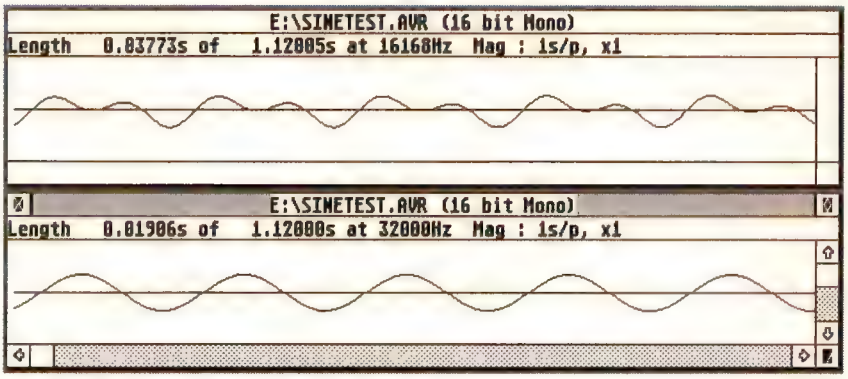
With a graphics card installed in the Falcon, you can expect to get resolutions of up to 1,024 x 768 with a 2Mbyte VRAM card (or even higher with more memory on the card), with up to 16.7 million colours. All of this extra space won't even slow down the machine; indeed, if it's like the Nova adaptor, CPU performance will actually be marginally better, and screen redraws can be up to ten times faster!

Although Eclipse has been primarily designed for connecting a graphics card, with suitable drivers it's quite feasible to use it as say, a modem or network card adaptor, since it is just a PCI interface. No plans have been made for such a development, but with so many clever Atari programmers about at the moment, it's certainly not beyond the bounds of reality.

And if this isn't enough to entice you to stick with the Falcon, there's also a new accelerator card under development. The Tempest card is based around a Motorola Coldfire processor (running up to 50MHz), and may also include an AGP adaptor, SDRAM slots (for up to 256Mbytes of TT-RAM), and will also be switchable with the 030 for 100% compatibility. Specifications are a little sketchy at this time, but hopefully they'll be a working prototype at the ACC'98 show in November to marvel at (or salivate over).

The Eclipse adaptor with VDI driver and graphics card (likely to be an ATI 3D Charger with 2Mb of VRAM), is expected to cost £199, and should be available in mid-November.

More from: Titan Designs, 6 Witherford Way, Selly Oak, Birmingham, B29 4AX Tel: 0121 693 6669 Fax: 0121 414 1630 Email: sales@titan-bss.co.uk. Web: http://www.titan-bss.co.uk.


E:\SINETEST.AVR (16 bit Mono)
Length 0.03773s of 1.12005s at 16168Hz Mag : 1s/p, x1
E:\SINETEST.AVR (16 bit Mono)
Length 0.01906s of 1.12000s at 32000Hz Mag : 1s/p, x1

Create wibbly waves from simple sine waves...

Living in harmony

Harmonisers can add an awful lot of character to a lead vocal, and can be exceptionally useful in cases of limited polyphony, and they're really not that difficult to program in a sample editor either. Creating different pitched versions of sounds in the digital domain requires a fairly simple system of decimation and interpolation; doubling the pitch by removing alternate samples, or copying each sample point twice to halve it. Of course, this method affects the sound's temporal characteristics as well, which is why we must first 'resample' them. Fortunately, Replay 16 has a huge supply of editing features ideally suited for a bit of creative pitch shifting.

First of all, load two copies of a sound into Replay 16, and then with one of the samples selected, open the Set Frequency dialogue box. Before committing yourself to a new pitch, it's possible to audition it by using the [change freq] button as opposed to immediately opting to resample. Once a pitch has been settled upon, change the frequency back to its original, and then resample it at the desired frequency. As a rough guide, pleasant harmonic intervals can be achieved by multiplying the original sample frequency by a factor of 0.75 (or 3 in 4) or 0.8 (4 in 5), using the formula: resampling frequency = original sample frequency x factor.

However, Replay 16 itself does a fairly good job of moving your choice of resampling frequency to the nearest integer division of the original frequency, so more often than not, it will sound good.

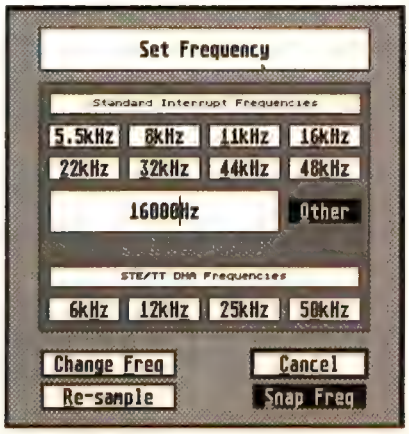
Finally, copy the resampled sound to the clipboard in its entirety, and then overlay it (using the 'average' setting) onto the original sound. Easy-peasy!

Of course, depending on whether the original is moved to the resampled version, or vice-versa, these example factors will produced pitched down and up effects respectively. It's usually best to overlay the original sample with the resampled version so that the initial sampling frequency is preserved. In this case, use a factor between 1.0 and 2.0 to produce a harmony lower than the original.

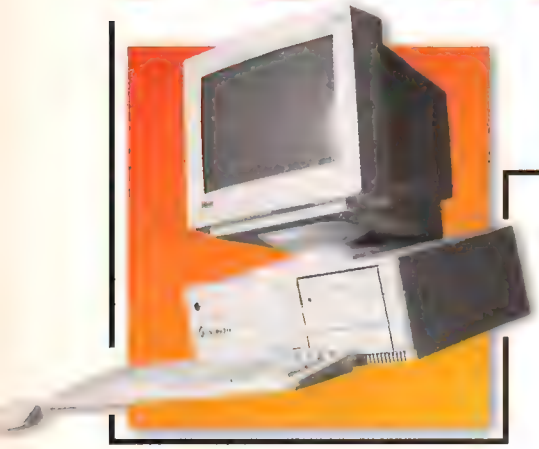
One other thing to consider is the 'effect depth'. This can easily be controlled by either attenuating or increasing the amplitude of the sample stored in the clipboard.

Have fun experimenting! There's some examples on this month's cover CD-ROM in *.AVR format to try out.

Fred's maths was miserable, which was OK because he was tone-deaf as well



PC TOOLBOX



News, advice, and software for PC users, compiled by Ian Waugh

NEWS

Reagan gates

For those of you who have been following the Microsoft vs. U.S. Department of Justice saga, here's the latest development. Bill Gates has suddenly remembered that he had decided to incorporate an internet browser into Windows just a few days before Netscape, the company, was formed. Other Microsoft staff have been having memory problems, too. Their selective, collective memory would give Ronald Reagan a good run for his money and no mistake.

However, the DoJ has subpoenaed a wad of Microsoft internal paperwork which should help jog a few memories. They are hoping to prove that Bill Gates was the mastermind behind Microsoft's anti-competitive actions. Shouldn't have thought there was much doubt about that, but it's a funny old country, America.

Avast ye swabs!

Microsoft's Anti-Piracy division has clocked up more hits, including a raid on a van which was carrying £1.5m of stolen Windows 95 upgrade CDs. The division was alerted by suspicious adverts on the internet. Over the past few months, goods worth over £50m have been recouped and more than one or two naughty boys have had their collars felt.

Little drive

IBM have launched the Microdrive, a hard disk the size of a coin which can fit inside an egg. It weighs less than an AA battery and has a storage capacity of around 340Mb. Its obvious market is digital cameras and hand-held PCs, but it could be used in a range of products such as GPS (Global Positioning System) navigation devices, phones and various consumer devices. It could even fit into a wristwatch. Shades of John Mnemonic! Maybe someone will design a portable sampler with it.

The full specs are: 1.68" (42.8mm) long x 1.43" (36.4mm) wide x 0.19" (5mm) high. It weighs 0.7 ounces (20 grams), rotates at 4500rpm and will be available in 170Mb and 340Mb capacities. It's expected to be available mid-1999.

"Ere! Are you really my bruvva?"

I think therefore IBM

IBM have also demonstrated a prototype of the 560X – a wearable ThinkPad (small notebook computer). It's based on a Pentium II 233MHz MMX chip with 64Mb RAM, 2Mb Video RAM, and it's SoundBlaster Pro-compatible. It also has a Transparent Head Mount Display and features a 340Mb Microdrive. It has microphone and headphone sockets and responds to voice commands. The Head Mount Display makes it suitable for use on the move, and although the display is currently 320 x 240 greyscale, a 800 x 600 colour display is being developed for viewing (!) next year.

Think small, think smart, ThinkPad

Millennium bug profits

It's difficult to know the truth about the state of the the world's PCs. How many are not Year 2000 compliant and will roll over and play dead – or worse – when the midnight hour strikes? Among those who investigate, report on and attempt to fix the bug, it's commonly believed that far too many users have left it far too late to do anything about it and there will be a severe wailing and gnashing of teeth when the judgement hour comes.

However, it is also believed that there are a mighty number who are merely procrastinating and, come the dawn of 1999, they will descend in their droves to PC suppliers. We're talking mainly corporate users here, and rather than try to make out-dated 286s, 386s and even 486s Y2K compliant, they are more likely buy new PCs. This, reckon the pundits, could cause a PC shortage.

Now, if the PC manufacturers get their sums right, they should cope with the demand. If they don't, there could be a shortage, although it's unlikely to affect the higher-end PCs which most musicians want. However, if the manufacturers expect increased demand and it doesn't happen, there could be a lot of stock lying around which they just might have to sell off cheaply. Who'd be a PC manufacturer?

Catching the bus

It's all about speed. Getting data from one place to the other as quickly as possible. In 1993, the 32-bit PCI bus running at 33MHz superseded the ageing ISA bus. But alongside the latest motherboards, PCI is looking decidedly slow and IBM, Compaq and Hewlett-Packard have announced PCI-X, a 64-bit interface which runs at speeds up to 133MHz. They claim it is up to eight times faster than PCI. Intel, meanwhile, have been working on another bus called NGIO (Next Generation Input/Output) which is incompatible with PCI, but whether or not the company dumps PCI completely remains to be seen. If Intel does not support PCI-X it could either herald its very early demise or we could be faced with a two-bus system which would make life very difficult for manufacturers and users.

Software and samples for PC are on the cover CD – check pages 8 and 9 for details

Ultimate Control For Control Freaks!

The PC 1600x™ is the ultimate MIDI controller. If you're sick of editing your events one at a time, put away your mouse, sit back in your chair, and control everything with the PC 1600x.

Originally designed to work as a keyboard controller, our customers quickly discovered that the PC 1600x can control any MIDI device. With 16 faders, 16 buttons, and 2 CV/footswitch inputs, ***its applications are limitless.***

PC 1600x

MIDI COMMAND STATION

Theme Parks - *Control special effects, lighting, sound systems.*

PCs - *Control hard disk recorders, sequencers, or sound cards.*

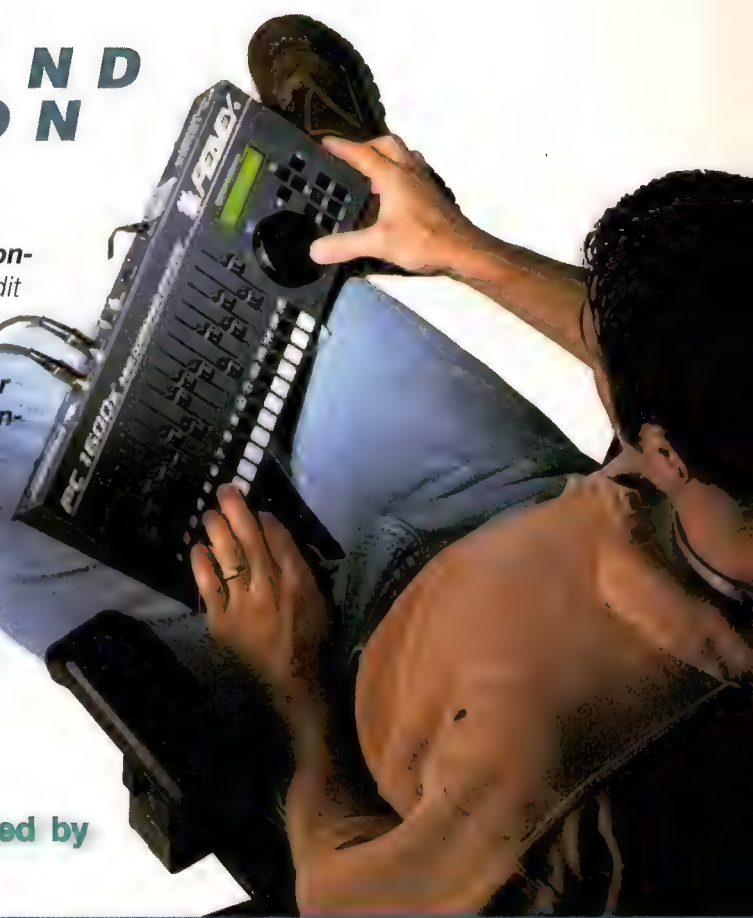
Lighting - *Control anything that accepts MMC.*

Recording Studios - *Control all tape recorders, minidiscs, and DAW systems that accept MIDI commands (example: Digidesign® Pro-Tools™, and Cakewalk™).*

Synthesizers - *Real-time control of virtually any MIDI parameter in today's synths. Edit patches with no extra hardware. No PC needed. Real-time control of FX processors.*

Video Production- *Control/edit VTRs.*

Computer Animation- *Intuitive keyframe control for character animation*



cakewalk

digidesign DEVELOPMENT PARTNERS

Virtually anything that's MIDI can be controlled by the Peavey PC 1600x MIDI Command Station!

THE SOUND OF EXPERIENCE.℠

Extended WARRANTY 12 PEAVEY ELECTRONICS

VISIT US ON THE WEB www.peavey.com

Peavey Electronics Corporation • 711 A Street • Meridian, MS 39301 • U.S.A. • (601) 483-5365 • Fax (601) 486-1278
Peavey Europe • Great Folds Road • Oakley Hay • CORBY • Northants NN18 9ET • England
Tel: +44 (0) 1536 461234 • Fax: +44 (0) 1536 747222 • ©1998

PEAVEY®

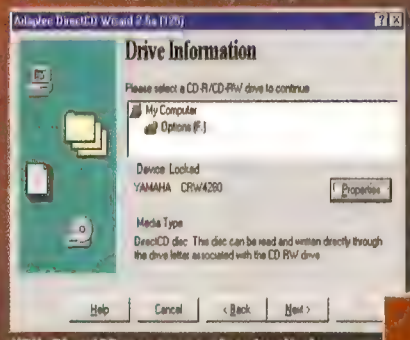
MORE DIRECT

If you have a CD-RW you probably have Adaptec's DirectCD. It tends to be bundled with most CD-RW drives and it gives you easy access to, and control over, reading and writing to CD-RW media. Now Adaptec have released DirectCD version 2.5, which has loadsa new funky features. Performance with CD-R is 60% faster under Windows 95, CD-R is now supported under Window NT 4.0 (previous versions only support CD-RW drives under NT), and the user interface has been updated.

The program uses a technique known as 'sparing', which increases disc life of CD-RW media by preventing rewriting on the same disc sector until the entire disc has been written to. This has around a 100Mb overhead, however.

The really nice thing about DirectCD – and the reason you'll want a copy if you're using CD-RW – is that you can read and write to it much as you would with a floppy. You can access it from the Explorer and it appears as a writable drive in most programs' Save As... dialog.

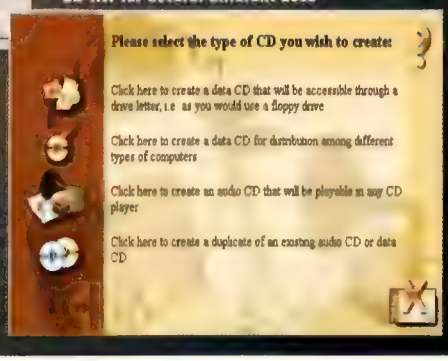
When you insert a blank disc into a drive, DirectCD pops up a screen asking what sort of disc you'd like to create. The options are a disc you can read and write to like a floppy, a CD for data distribution on different types of computers, or an audio CD, and there's an option to duplicate a data or audio CD. The program also features a ScanDisc utility which tries to repair CD-R discs that have become corrupted.



With DirectCD you can read and write to CD-RW as you would to a floppy disk

DirectCD creates CDs using packet writing and UDF (Universal Disk Format). Packet writing is a method of writing to a CD in small increments without huge overhead requirements. UDF is a file system that works well with packet writing and which has been endorsed by the Optical Storage Technology Association (OSTA) as the file system to be used with DVD. This should virtually eliminate the dreaded buffer underrun error.

Users of DirectCD 1.0 or 2.0 can download an upgrade to v2.5 free of charge from Adaptec's website: http://cdr.adaptec.com. The full version will cost around £45. More from Adaptec on 01276 854500.


Please select the type of CD you wish to create:
Click here to create a data CD that will be accessible through a drive letter, i.e as you would use a floppy drive
Click here to create a data CD for distribution among different types of computers
Click here to create an audio CD that will be playable in any CD player
Click here to create a duplicate of an existing audio CD or data CD

DirectCD simplifies the process of formatting a CD-RW for several different uses

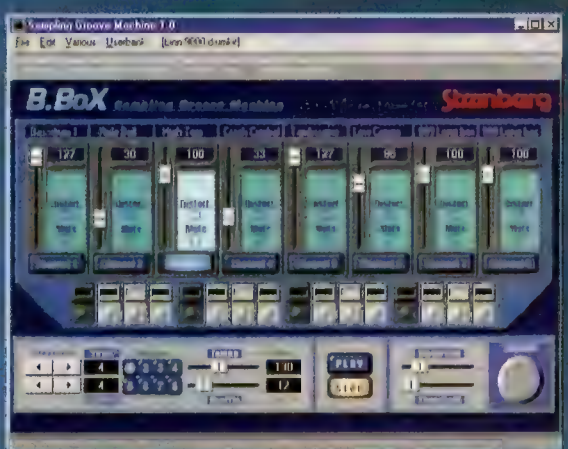
B IN YOUR BOX

The retro scene, which evolved around old analogue gear, seems to be carving out a market for itself in software – using the latest technology to recreate the oldest sounds. One of the newest bits of retro gear to come along is Steinberg's B.BoX, a virtual drum machine, designed around analogue drum boxes but with a chameleon approach to sounds.

The interface is simple and easy to use. The main display has eight slots which hold a drum sound each. There are 16 rocker switches beneath them, one for each 1/4 note in a bar (you can also select 12 hits per bar), and you switch them on at the places you want a drum to sound. It'll be very familiar to drum programmers, both the computer variety and those who have used drum machines.

The program comes with sampled sound banks from over a dozen classic drum machines including the Roland TR-707, 808 and 909, the R-8, the CR-78, the Linn 9000, and a Simmons kit, and there are also samples of real drums played by a real drummer. There's a novelty. You can also import samples of your own in WAV format so you can create truly unique kits. You don't have to use drum samples, of course, although you can't use files larger than about 350K. A favourite technique is to use vocal samples.

Each sample has a mute button, and you can add a distortion effect to selected samples. You can also adjust each sample's volume and, for finer tuning, the velocity and pan position of each hit. There's a shuffle control which adds, er, shuffle timing to the riff. There are also about 20 groove templates available from a menu, which change the timing and velocity of the hits to provide grooves such as Chemical, Industrial, Drum 'n' Bass, Hiphop, Rave, Techno, and so on.



You get classic drum machine programming and lots of classic sounds with Steinberg's B.BoX

You can create up to eight patterns and each pattern can be up to 16 bars long, so there's scope for creating complete songs. However, there's no facility for chaining patterns together, so to play a song you have to physically change the patterns on the fly. It would be nice, too, if the display changed to show the current bar which is playing in multi-bar patterns, and how about a little LED running along the bottom of the pattern to show which hits are being played?

Nice, too, would be a facility to sync it up to a sequencer so you could create some grooves and add other parts on top in the sequencer. B.BoX has a stream to disk function which saves the song as an audio file which you can import into a sequencer or digital audio recorder and build other parts around. So if you decide you need to change the drums at a later date, it can be a bit of a faff.

The version we had contained a German instruction manual – not even any English on-line docs – and although B.BoX is easy to use, check that English docs are included if you think you'll need them.

The program is great fun and will appeal to many retro fans who have managed to stave off the impulse to overspend on old analogue hardware. Lack of MIDI and sync support, however, along with a few other features reduce its flexibility somewhat, although it does leave room for expansion in version 2. If you like messing with digital audio it may be just the job, otherwise you might want to consider Steinberg's Re-Birth, which has sync facilities.

There's no software demo of B.BoX but you can try it out on-line at: http://www.dialspace.dial.pipex.com/town/road/gbp97/bbox.htm. This saves a series of patterns to disk as audio files, and there's a couple on this month's CD. B.BoX costs £59.95 and is available from Arbiter Pro Audio on 0181 207 5050.

ONE LISTEN... YOU'LL GET IT.

the DRAWMER MX40

STUDIO SOUND *Zenon Schoepe:*
"If you've never heard Peak Punch, but regularly find yourself attempting to massage a bit of attack out of flabby kicks and snares, then this is something to look at. It immediately makes things apparently more lively and aggressive."

THE MIX *Trevor Curwen:*
"On recorded drums the MX40 was able to successfully separate kicks, snares and toms from the rest of the clutter...Peak Punch worked well on adding hard front end punch to bass drums. Four channels of quality gating in a 1U rack space for less than £400 has to be a bargain, and for someone with a small studio, it's an ideal buy."

MUSIC MART *Chris Martin:*
"The external key feature is great for triggering a snare from a contact mic, adding real gated reverb, or tightening up ragged backing vocals. It's possible to tailor drum tones to suit a mix, especially with the Peak Punch button, and a very sharp tone can be had with a fast attack and release. The MX40 is a real winner and at the asking price deserves to be populating everyone's rack."

PRO AUDIO REVIEW (USA) *Ken C. Pohlmann:*
"Fast and easy to use, the MX40 provides the essential flexibility you need in a gate, it fits four gates into one unit, and it sounds excellent. Whether you need gates to achieve a little silence, clean up a nasty signal, extract out a reliable trigger, or create the ultimate sound, the MX40 quad gate is a great device."

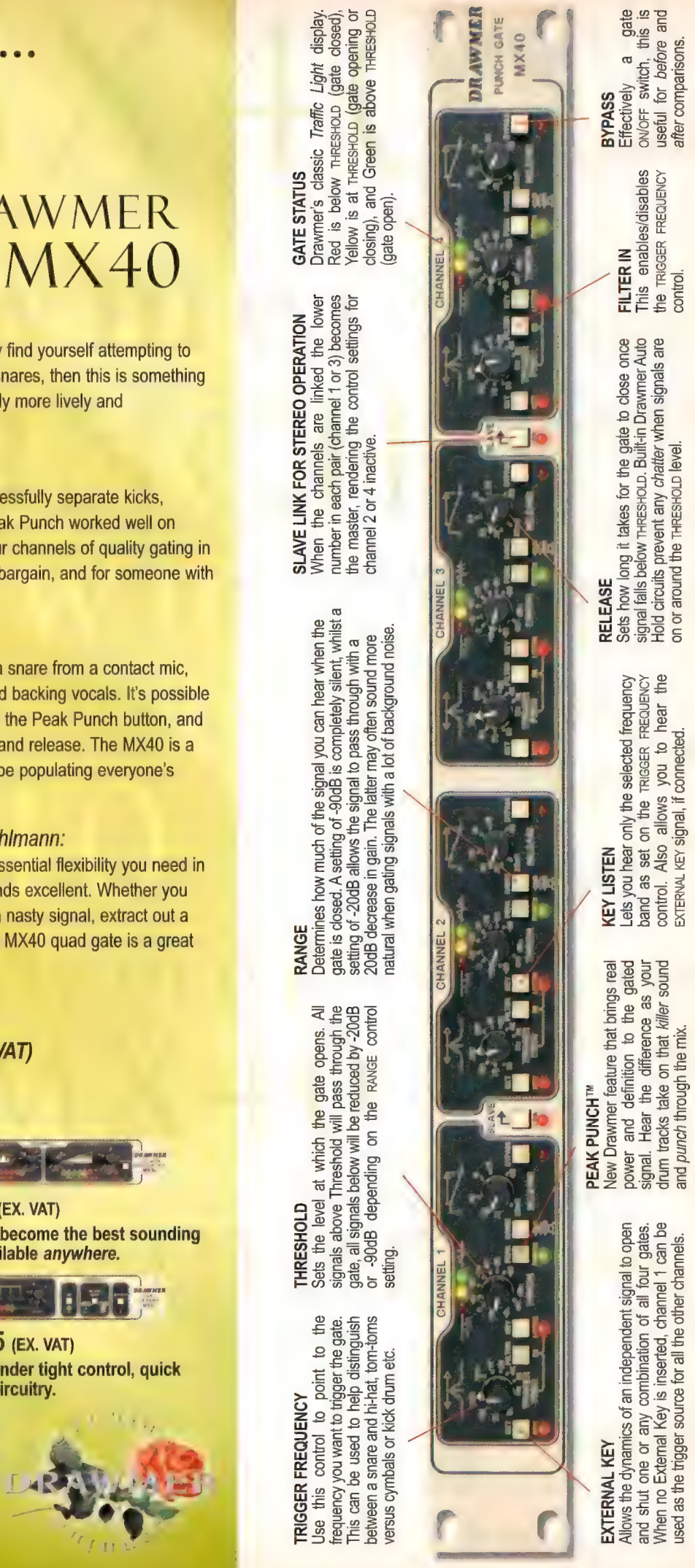
The Drawmer MX40 Punch Gate £325 (EX. VAT)

MX Series products:

MX30 Gated/Comp/Limiter £225 (EX. VAT)
The MX30 has blown away all competition to become the best sounding budget-minded Gate/Compressor/Limiter available *anywhere*.

MX50 Dual 'Vocal' De-Esser £245 (EX. VAT)
The ultimate tool for keeping sibilant peaks under tight control, quick set-up and packed with intelligent Drawmer circuitry.

Drawmer Ltd. • Charlotte Street Business Centre
Wakefield • West Yorkshire • WF1 1UH • England
Tel +44 (0)1924 378669 • Fax +44 (0)1924 290460
e-mail: sales@drawmer.co.uk
www.proaudio.co.uk/drawmer.htm



GATE STATUS
Drawmer's classic *Traffic Light* display. Red is below THRESHOLD (gate closed), Yellow is at THRESHOLD (gate opening or closing), and Green is above THRESHOLD (gate open).

SLAVE LINK FOR STEREO OPERATION
When the channels are linked the lower number in each pair (channel 1 or 3) becomes the master, rendering the control settings for channel 2 or 4 inactive.

RANGE
Determines how much of the signal you can hear when the gate is closed. A setting of -90dB is completely silent, whilst a setting of -20dB allows the signal to pass through with a 20dB decrease in gain. The latter may often sound more natural when gating signals with a lot of background noise.

THRESHOLD
Sets the level at which the gate opens. All signals above Threshold will pass through the gate, all signals below will be reduced by -20dB or -90dB depending on the RANGE control setting.

TRIGGER FREQUENCY
Use this control to point to the frequency you want to trigger the gate. This can be used to help distinguish between a snare and hi-hat, tom-toms versus cymbals or kick drum etc.

PEAK PUNCH™
New Drawmer feature that brings real power and definition to the gated signal. Hear the difference as your drum tracks take on that *killer* sound and *punch* through the mix.

KEY LISTEN
Lets you hear only the selected frequency band as set on the TRIGGER FREQUENCY control. Also allows you to hear the EXTERNAL KEY signal, if connected.

RELEASE
Sets how long it takes for the gate to close once signal falls below THRESHOLD. Built-in Drawmer Auto Hold circuits prevent any *chatter* when signals are on or around the THRESHOLD level.

FILTER IN
This enables/disables the TRIGGER FREQUENCY control.

BYPASS
Effectively a gate ON/OFF switch, this is useful for *before* and *after* comparisons.

EXTERNAL KEY
Allows the dynamics of an independent signal to open and shut one or any combination of all four gates. When no External Key is inserted, channel 1 can be used as the trigger source for all the other channels.

MAC TOOLBOX

News, advice, and software for Mac users, compiled by Ian Waugh

NEWS

iMac news

Apple's big news is, of course, the iMac, with predicted sales of over 400,000 in the first six weeks in the USA. Interestingly, 15% of initial sales went to new computer users while 13% went to existing PC users. The iMac is also available through Apple's online store:

http://www.apple.com/ukstore

Order a G3, a PowerBook or an iMac from Apple's UK online store

Mac and potatoes

Not content with breaking the rules of conventional computer stores by stacking PCs alongside pomegranates and PG Tips, Tesco are to pilot the sales of the iMac in two of their major stores in Cardiff and Stirling. The scheme will run for one month and if it's successful you can bank on the scheme spreading to other stores. Mass Macs at last, eh?

Mac online

Tesco are also, obviously, promoting the use of TescoNet (their own internet service) with the iMac, while Apple have teamed up with three other ISPs – BT Internet, Direct Connection and LineOne. The iMac comes with special software to guide users through the process of signing up with the ISPs and all the user need do is type in a few personal details and their credit card number. The Internet Software Assistant gives users details of the services so they can decide which one best suits their needs.

Expand-a-Mac

Apple's iMac is undoubtedly exceedingly good value for money; however, it does have a few shortcomings, particularly if you're thinking of using it for music. First of all, it has no floppy disk drive. Yup, that's a weird one. No doubt the thinking is that most software these days comes on CD ROM and you can transfer files to other machines via the internet. But what if you want to transfer a few small files to someone who isn't on the net, or what if you buy software which does come on a floppy? And what if you want to use software which uses a hard disk install, as many music programs do?

Floppy drives are expected to be available soon, probably costing around £100-120, and they will plug into the USB bus. Mac floppy drives are much more expensive that PC drives, so their exclusion made a significant contribution to keeping the iMac price below £1,000.

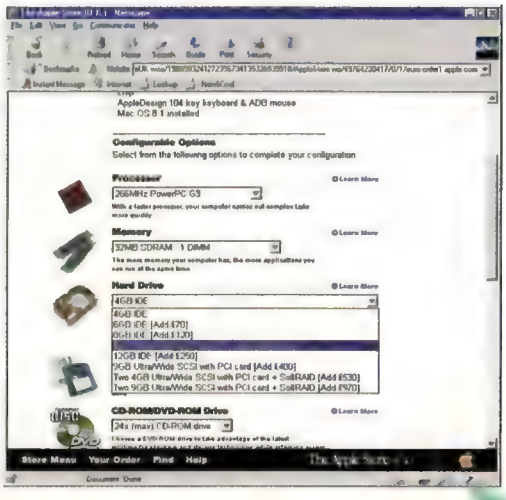
The iMacs only come with 32Mb RAM. Most sequencers and digital audio software would like more, preferably 64Mb – as indeed would many applications. Nowadays, 32Mb is barely an adequate amount. Some resellers will fit more RAM for you, some won't, but it is an additional expense – it's not a lot, but something to consider all the same.

Another potential disadvantage is the iMac's lack of a PCI interface, which means you can't plug a digital audio card into it. However, here's an interesting thing. The underside of the iMac motherboard contains a 160-pin slot called Mezzanine (Apple call it Perch) which is believed to be similar to the Personality slot found in G3s which, in turn is a modified PCI slot. Got that? The Personality slot can be used for high bandwidth applications such as an MPEG-2 decoder card for playing DVD video.

Anyway, it would appear that the iMac has the potential for expansion but Apple have said that this slot will not be supported for use by third parties. What is possible is that future iMacs could be given some sort of expansion facility, but we'll have to wait and see.

Okay, but what about MIDI? Er, right. Well, the iMac has no serial ports – no Modem or Printer port to plug a MIDI interface or To Host connector into. It dispenses with all that in favour of the USB socket. Now, on the face of it this is a good thing. It supports transfer speeds of up to 12Mbps (serial port speeds are only 230Kbps), you can connect up to 127 devices at once (eat your heart out SCSI) and you can hot-plug them, that is, plug and unplug them while the Mac is still on

You can specify a SCSI hard drive – far better for digital recording than IDE



Mac software and samples are on the cover CD

without rebooting.

But while the adoption of the USB propels the iMac into the future, there are, currently, not many USB devices to plug into it. And there's not a USB MIDI interface. However, these may well appear in due course, and Opcode have announced that their OMS will support communication over the USB bus. They have also announced the DATport, a S/PDIF interface which will support 24-bit digital audio transfer via the USB.

So if you're eager to use the iMac for music, you may have a long wait while the hardware catches up. Otherwise you might be better off investigating the new G3s. Which leads us nicely to our next story...

G3 for me

Apple have targeted the more demanding user with their three new G3 models. The G3 266MHz Desktop model at £1,279 has 32Mb RAM (remember to upgrade this), 1Mb level 2 backside cache, 4GB IDE hard drive, 24-speed CD ROM and 2Mb video RAM. The G3 300MHz Desktop at £1,644 is similar-spec'ed but has 64Mb RAM (that's better!), a 6Gb HD and an internal 100Mb Iomega Zip Drive. The G3 300MHz Minitower at £1,973 has an 8Gb HD, 6Mb video RAM and additional video connectors.

The new biggy is the G3 333MHz Minitower at £2,501 with 128Mb RAM and a 9Gb UltraWide SCSI HD. It's a shame Apple are going with IDE hard disks in the lower models, particularly as Mac drives have always, traditionally, been SCSI-based. However, you can specify a 4Gb UltraWide SCSI drive for another £141 if you order through the Apple online store: **http://www.apple.com/ukstore**.

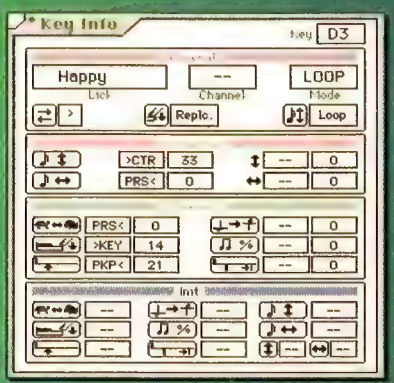
CAN U LICK IT?

The Lick Machine is a real-time composing arranger and manipulator. So say the docs. Basically, it lets you record grooves or licks which you can play back and manipulate in real time. Exciting, eh? Well, it's actually quite sophisticated.

The program consists of several windows, so let's take a little rip around the Lick Machine. In the Record window you record a lick. This will usually be a musical phrase, but you can record any type of MIDI data, not just notes. You can also import a MIDI file into the Recorder.

You assign the Lick to a note in the Keys window and trigger it by pressing that note on your MIDI keyboard. The program can store up to 2,048 Licks and you can play them all at once – in theory, as that would inevitably cause MIDI overload. However, the program has a limit of around 8,000 MIDI event in total.

The main manipulation area is the Key Info window. It has areas for controlling tempo, velocity transposition, note density, Lick length and Lick start and stop. You can assign these to virtually any kind of MIDI data including key number, key pressure, a controller, aftertouch or pitch bend. So, you could control the tempo with the pitch bend wheel, adjust the velocity via aftertouch and transpose

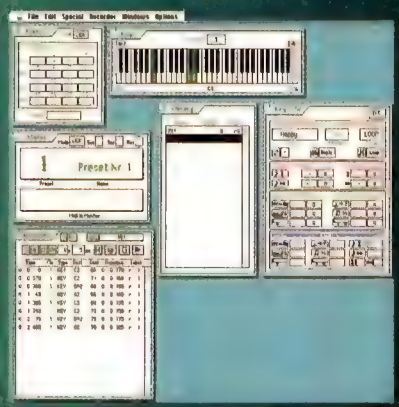


The Key Info window, set up the control parameters for lick manipulation

a Lick with the modulation wheel. You could certainly create some wonderful control combinations here.

In case the note density parameter needs a little explanation, it lets you remove notes (or whatever data the Lick contains) by reducing the value of the controller.

The Deviation section of the Key Info window lets you control two more parameters – Time Deviation and Pitch Deviation. This is, er, interesting. Briefly ('cause there's a bit more to it than this),



All the windows you need for recording, storing and configuring riffs and grooves

a percentage of the time, instead of playing the designated note, Pitch Deviation picks a note from one of the notes you have previously played. Hmm, yes. Time Deviation varies the timing of the events in a Lick but it tries to keep the overall time the same so the Lick still 'keeps the beat'.

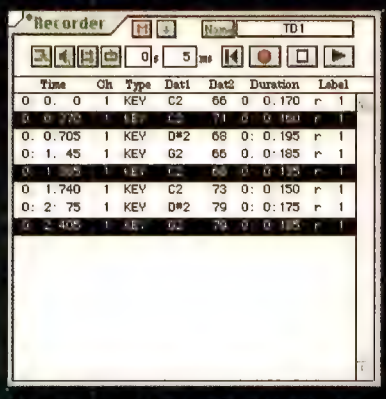
The Lick Machine has 128 presets which can each have different Lick assignments, control settings and so on. The Licks are shown in the Library window and you drag a Lick from the Recorder to the window to put it in the Library. You can then drag it from the Library to the keys window to assign it to a MIDI key.

The program also has a macro function. You can use this to trigger several Licks at the same time, or to start playing a Lick when you change preset. Another possibility is to create an automatic crossfade between two Licks. If the velocity of one Lick responds to modulation data, say and the velocity of another Lick responds to inverse modulation values, then twiddling the Mod wheel while these are playing will crossfade between the two.

Other features include several filter set-ups where you can filter out MIDI event, channels, controllers or whatever. And the list goes on. It's certainly comprehensive.

The Lick Machine was created by the same team who wrote LiSa, the Live Sampling program which featured in issue 54's *Toolbox*. Like LiSa's docs, the Lick docs are on disk and they are terrible. No, the information isn't terrible but it's in eDoc Reader format and some of the words appear on top of each other. Maybe it needs certain fonts installed, but it doesn't tell you what they are, and the problem was apparent on two different machines. But what's even worse, there's no contents or index and there's 60 pages of it. Blimey! You'd think they could make just a bit more user-friendly. Your best option is to print it. And you will have to read the docs to learn how everything fits together.

Like LiSa, the Lick Machine costs $199 and, again, maybe it's a tad expensive. However, there's a lot to the program and



You can cut, copy, paste and edit the data in Lick Machine's recorder window

if you like messing with grooves and riffs or working and extemporising in real-time – something of lost art, now – you'll certainly want to try it. And that you can, 'cause there's a demo on this month's cover CD, and you can download it from: http://www.xs4all.nl/~steim/lickmachine.html.

HELP FILE

THE MASTERMINDS
THIS MONTH'S *HELP FILE* TEAM

NAME: Ian Waugh
OCCUPATION: computer journo
CHOSEN SUBJECTS: computers, software, bungee-jumping

NAME: Paul Mac
OCCUPATION: technical editor, *The Mix*
CHOSEN SUBJECTS: Apple Mac, hardware, flat-planning programmes

NAME: Trevor Curwen
OCCUPATION: producer/engineer
CHOSEN SUBJECTS: processors, vintage sounds, vintage mags

Problems in the studio? Ghosts in your machines? Then you need to contact the *Help File*, where our team of audio experts do their best to solve your technical torments

I want sound!

Q I am a total beginner to the MIDI scene and have just gone out and bought a small MIDI slave keyboard for my PC. The software that came with it allows me to assign various WAV files to each key and then trigger them while recording the sequence. Now, I'm aware of the fact that the keyboard is quite capable of triggering an external sound module, and so on. I don't have any of this flash kit right now, and was wondering if there are any programs out there (preferably free or shareware) that will allow me to use my PC as the sound module.

The closest I can get at the moment is to assign the same WAV to all keys and then adjust the pitch of each one until I end up with a couple of octaves of the same sound. This is very tedious, and I have no way of saving that sound set. I do intend to buy some MIDI gadgets at a later date but would like to get some more use from this keyboard and understand it a little more before going any further. Please try not to blind me with science – I have the brain power of a small rodent!
Paul, Cambridgeshire

A You don't say what the keyboard is, what the software is, or what your soundcard is, so it's difficult to give a precise answer. But we'll have a go!

Assuming that the keyboard has a MIDI Out and the soundcard has a MIDI In, you should be able to play the soundcard from the keyboard, unless it is an audio-only card, which is possible, but unlikely. You do need a sequencer, however, to act as a go-between between the keyboard and the card. Most soundcards include just such a piece of software. Check your hard disk, the installation disks that came with the soundcard, and the documentation. You're looking for something like Quad Audio Master, Cubasis, MicroLogic, Cakewalk Express, or MIDI Orchestrator. Or it could be something else entirely!

Software galore from our sister mag

If you don't have a sequencer, check out the cover CDs of various music and PC magazines because they often contain sequencer programs. In fact, grab issue 1 of our sister magazine, *Computer Music*, which came out in October, because that has a full version of Cubasis Audio Lite on the CD.

Also, check the Multimedia Control Panel and the MIDI Tab and look for a sound set for the card, which would say something like AWE64 MIDI Synth. This selects the on-board sounds on the card. If there's nothing there, either the card has no on-board sound which, as we've said, is unlikely, or the drivers have not been installed, in which case you'll have to run through the card's installation routine again.

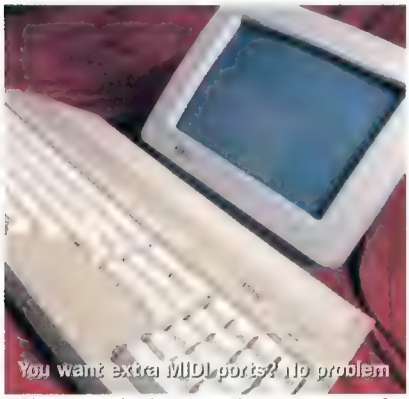
Okay, open the sequencer, select a track and try playing. You may have to set the track to MIDI channel one and make

The Help File, *The Mix*,
Future Publishing, 30 Monmouth St, Bath BA1 2BW
email: themix@futurenet.co.uk

sure the keyboard is transmitting on channel one, and you may have to select a sound in the sequencer's track list.
Ian Waugh

Extra MIDI for Atari

Q I have been gradually adding synths, samplers, and so on to my trusty Atari 1040 STE, but lately I bought an Alesis NanoSynth, which (to my horror) I find works with General MIDI. My Akai sampler and Alesis NanoBass work very well together off the same MIDI output F from Creator/Notator with Unitor hardware that's bolted onto the Atari. But as soon as the General MIDI device is routed to the same MIDI output, all hell breaks loose and unwanted noises turning off and on swamp the track. It has been explained to me, and the people at Emagic couldn't have been more helpful; their hexadecimal program change document looked very interesting but meant as much to me as a pencil would mean to a herring. Once upon a time there was a device called Export, which gave the Atari user a further two MIDI ports (C and D, I believe). Is there anyone out there who would be able to supply me


You want extra MIDI ports? No problem

with one, or is there an alternative way of gaining extra MIDI ports as the Export device seems to piggyback onto the Unitor hardware?
Pierre Tubbs, London

A The cheapest and simplest way of getting an additional MIDI output is to build an adaptor that fits onto the serial port. For this, you'll need:

- 1 x 25-pin D-type plug (female)
- 1 x MIDI plug (180 degree 5-pin DIN)
- A few centimetres of single, and two-core cable
- 2 x 220Ω resistors

Connect pin 2 of the 25-pin plug (data line), through one of the resistors, to pin 4 on the MIDI plug. Next, using the two-core cable, solder both parts to pin 7 (signal ground) on the 25-pin plug; split the other end of the wire in two, and attach the second resistor to one of the ends. Solder the other part of the wire onto the earth connection of the MIDI plug (pin 2). Finally, solder a cable between the second resistor and pin 5 on the MIDI plug.

Programs like Logic and Notator have a driver built in to access the serial port, and Cubase can be set up to send MIDI data (with a simple-to-install MROS driver), so very little software configuration is required. The parts for this cost about £2 and can be bought from electronics suppliers such as Maplin.

An extra 16 channels should be all you need for a GM device, but if more is better (and in the case of MIDI, it usually is), then maybe Cimple Solutions' Extraports is the ideal solution (Tel: 0181 904 4141 for more details, or see last month's *Atari Toolbox*). This has three separate outputs (48 channels), and also plugs into the serial port, thus requiring no additional drivers when used with Logic and Notator. It's a bit more expensive than building one yourself, but the extra MIDI channels will give you ample room for expansion, so it's probably worth it.
Paul Mac

Patch proper

Q Being a regular reader for a couple of years now, I finally need help! I used to be a guitarist in a rock band, but casual readings of your magazine at a friend's house made me change direction. Anyway, I need to purchase a MIDI patchbay and I was hoping you would guide me. Also, what way should I wire it all up? I read that you shouldn't have more than four pieces of equipment patched with MIDI Thru.

My system includes a Pentium 166MMX with an AWE64 Gold and Steinberg's Cubase VST, Wavelab, Rebirth, and Recycle, plus SoundForge 4; I also have an Akai S3000, Alesis Microverb, Novation Super BassStation, Alesis HR16, Korg Prophecy, Korg Trident MkII, Jen SX1000, and a Yamaha DX11.
Stephen, Ireland

A You have a fair bit of gear there, and if you've tried using MIDI Thru with it all you may notice a delay between the first and last instruments in the chain. This is caused by the signal getting delayed on its way through the instruments. It's also likely that the signal will deteriorate the more Thrus it, er, goes through, which can result in MIDI errors, drop-outs, and other problems.

One solution is a Thru box. It takes an Output from the PC and transmits identical signals to several Out sockets simultaneously. This maintains timing and signal integrity.

However, you will have noticed that unless you want all the instruments to play in unison you have to restrict the

HELP FILE GLOSSARY

Your guide to the technical jargon contained within the Help File

Cardioid
A particular microphone polar pattern (area 'listened to'). Describes a heart shape pointing away from the capsule.

Condenser
A type of microphone that uses the reaction of a diaphragm to change a capacitance. Condenser microphones need an applied voltage to work, some with battery, some with an external 'phantom' power supply.

Dynamic
A type of microphone that uses a coil (attached to the diaphragm) moving in a magnetic field to produce an alternating current proportional to the sound waves that move the diaphragm.

Effects
Anything, software or hardware, that alters the nature of a signal, such as a reverb unit, pitch shifter, or vocoder.

EQ
Equalisation. Frequency (pitch) selective filtering of audio in order to boost or cut levels inside a specified frequency range (bandwidth).

Frequency response
How a piece of equipment affects the frequency spectrum of an audio signal. It is often expressed as a bandwidth and the amount of amplitude variation within it.

GM
General MIDI. Protocol introduced in 1991 to ensure a synth's compatibilty with MIDI files. GM specifies a list of 128 instruments, complete with a short list of controllers.

Sequencer
MIDI recording, editing, and playback software. Many sequencers now include audio recording and editing.

Shareware
Software with a shareware license agreement. It is freely available on the internet, or cheaply from third-party companies.

Opcode's Studio 64X: could it be the answer to your MIDI routing problems?

MIDI channels they each receive on, which may limit your multitimbral arrangements somewhat. A MIDI Patchbay will make it easier to redirect the MIDI signals between your gear but it won't give you more MIDI Outs, so perhaps a better option is to consider a multi-output MIDI interface. There are lots of these, and if you check the PC Hardware section in our *Buyer's Guide*, you'll find half a dozen of various shapes, sizes and prices. There are also multi-out interfaces/patchbays listed there, and you may want to consider one such as Opcode's Studio 64X (£269 from SCV on 0171 923 1892) or MOTU's supa-dupa MIDI Timepiece AV (£649 from Musictrack on 01462 812010), which comes with a pilot's license.

It may also be worth investing in a MIDI Thru box for the BassStation, Jen, and Microverb, which you probably only want to give one MIDI channel each. Again, there's a comprehensive list in our *Buyer's Guide* and I can personally recommend the Philip Rees V10 (£40).

Anyway, a good first step is to decide what units you'd like to have complete 16-channel autonomy, what ones would be happy sharing channels on the same MIDI Out, and what units you may want to control from the others. Then you'd have a better idea how many Ins, Outs, and Thrus you need.

As for wiring it up, I'd suggest you have one keyboard as the Master, which you use for recording and controlling the other modules, but if you have a 2-In interface you could wire up two keyboards to act as controllers and switch between them as required.

Ian Waugh

Lo-fi logistics

Q As a newcomer to sound effects I was impressed by your advice on 'deep echoes' in *The Mix*, September 1998. Could you please advise me on the following:

For a dramatic purpose, I wish to simulate the PA heard on some railway stations, one that is reverberant to the point of unintelligibility, and I need to keep the cost as low as possible. Would I be able to achieve this with a reverb unit? If so, would the Alesis Nanoverb or the Viscount Gammaverb do the trick? (I don't need stereo).

Any help you can give will be much appreciated.

Leslie Gilbert, London

A Hmm... yes. The sound of the public address systems on some of our great British railway stations can leave a lot to be desired. This is due to a combination of factors, such as the type of PA, type of microphone, location of speakers, amount of background noise, whether the speaker is eating a sandwich while speaking, and perhaps most importantly, the size of the ambient space and the type of materials within it.

I'm not too familiar with the reverb units that you mention, but any inexpensive reverb unit should be able to simulate the sound you're after. The key to it is to swamp the sound with reverb. Choose a hall reverb, or one that attempts to simulate a large space (a plate reverb will also do the trick), and feed the voice through it, gradually turning down the amount of dry signal in relation to the effected signal until you get the effect you want. If you have the facilities, you might want to EQ the voice before it gets to the reverb to make it sound like it's coming through a nasty speaker. Try cutting the bottom and boosting between 3kHz and 5kHz, although taking some top end will make it duller and less intelligible.

If your reverb has parameter adjustment, try increasing the pre-delay and the reverb time.

Trevor Curwen

Know your mics

Q I'd like to know what the following microphones are used for (instruments or vocals): AKG C12, Beyerdynamic M201, Peavey PVM880. Also, could you tell me the difference between the Shure SM58, Beta 58, and Beta 58A?

Tim, email supplied

A Introduced in 1954, the C12 is the classic AKG valve condenser mic, and is used primarily for vocals. The C12A is a later valve model with a separate power supply. I've used one of these on vocals and got good results. The C12VR is a vintage reissue.

Beyer's M201 is a dynamic microphone with a hypercardioid response and is useful in a variety of applications: snares, guitar amps, and vocals. In use as a vocal mic, the 201 seems particularly suited to female vocals.

The Shure SM58 is the traditional hand-held vocal mic, and has been for some years. The Beta 58 is the updated version and has a higher output level. It had an extended frequency response over the standard '58, and a tighter cardioid response. The 58A is the latest version with a revised shock mount to further reduce handling noise.

The Peavey PVM880 is a hypercardioid dynamic mic and is recommended for use as a hand held vocal microphone.

Shure's 545, also known as the Unidyne III, is a less expensive mic, intended for use with vocals and drums.

Trevor Curwen

A multitude of mics for a multitude of applications

ACOUSTICIANS ON CALL

Just because they're so nice, the chaps at Recording Architecture have agreed to take questions on studio acoustics from any readers of *The Mix*. All you have to do is Fax, post, or email your question to the *Help File* and we will do the rest.

Recording Architecture have a string of big clients in their portfolio, having designed studios literally from the ground up. They pioneered the Black Box System, a modular acoustic conditioning system for studios where budget and a lack of planning permission prevail.

So if it's where to put your speakers, how to stop the neighbours complaining, or how to tweak your environment for the best sound around, *The Mix* can help. Of course, the more detail you can include in your question the better. Stuff like room dimensions, equipment lists, and a detailed description of the problem will all help us to help you.

Sound Solutions

Computer Music Specialists

Steinberg

cakewalk

The latest plug in's have arrived. Direct X and TDM. Opcode's superb Filter and classic Vocoder along with Fusion Vinyl are all here at affordable prices. Cakewalk's CFX1 package with compressor limiter etc. Waves high quality reverb and audio processing. Waldorf D Pole and more . inc Q Tools 3d sound processing

Fusion Vocode Mac/PC	£125.00	Vocode TDM	£239.00	Fusion Filter Mac/PC	£125.00
Fusion Vinyl	£ 79.00	Cakewalk CFX1	£129.00	Q Tools AX	£179.00
Waldorf D Pole	£149.00	Wavelab Plug ins	£289.00	Cubase Plug ins	from £119.00
Easy Waves	£125.00	Native Power pk	£379.00	Waves TDM Bundle	£739.00
Waves Gold Bundle TDM	£1649.00	DSP Bundle PC	£739.00	DART (Audio restoration)	£ 49.00

Cooledit Pro is fast becoming one of the most respected audio editing packages for the PC, with superb noise reduction and fantastic real time preview of most effects it is truly stunning. It even has a 30 band graphic eq with real time preview! A truly powerful package. Sound Forge too is here along with Wavelab and XG Edit, Gary Gregson's superb XG Editor

Cooledit Pro	£279.00	Sound Forge	£279.00	Wavelab	£279.00
XG Edit Registration	£ 25.00	XG Edit CD	£ 10.00	Recycle PC/Mac	£179.00

A new breed of software has arrived offering powerful synthesis and sampling, the first was ReBirth now in V2 form, one of the latest is Reality a super power synth coping with everything from FM to physical modelling, on top of this it is a mega powerful sampler and offers modulation of samples. VAS (Virtual Analogue Synthesiser) offers some powerful software synthesis at an entry level price

Rebirth PC/Mac	£139.00	Reality	£299.00	VAS	£ 29.95
XPOSE	£349.00				

Phat Boy is here, the superb MIDI controller from Keyfax with enough knobs to keep you playing for hours! Event Layla, Gina and Darla in stock, please phone for superb pricing. Midiman's superb DMAN 2044 in stock now!

Phat Boy	£139.00	Pinnacle	from £359.00	Fiji from	£229.00
Layla etc	£phone	DMAN 2044	£219.00	Terratec EWS64 XL	£379.00
Digital Audio Labs	£phone	SEKD	£phone	Wavecentre	£429.00
Tango	£phone	Sonorus STUDI/O	£579.00	Yamaha XG from	£ 95.00
Montego	£109.00	Malibu	£ 99.00	Daytona	£ 89.00

We also stock, sound card cables, Newtronic & Keyfax Midi Files, Sample CDs, Cakewalk, Cubase and all major sequencers at superb prices. Notation software from Personal Compose £89 to Finale and more. Master keyboards & SSEYO. Please phone for items not listed. Sound Solutions for all your Computer Music needs

Data House, 72 Station Road, Southwater
West Sussex RH13 7HQ
Tel: 01403 732606 Fax: 01403 732607
Web: www.soundsol.com
Email: sales@soundsol.com or info@soundsol.com

Unleash your creativity with ..... Sound2Midi™

NEW VERSION

TRANSCRIBE YOUR AUDIO PERFORMANCE INTO MIDI - USING ANY PC SEQUENCER OR SCORING SOFTWARE !

If you sing, whistle, scat, play brass, woodwind or strings; ***Sound2Midi*** is your gateway to a new and exciting way of making music!
Just sing or play into your PC microphone and Sound2Midi converts your performance sending MIDI data to any sequencer software application.

- On the fly conversion.
- Import WAV files and convert to MIDI.
- Rhythm mode - for creating drum sequences.
- Many other additional features.

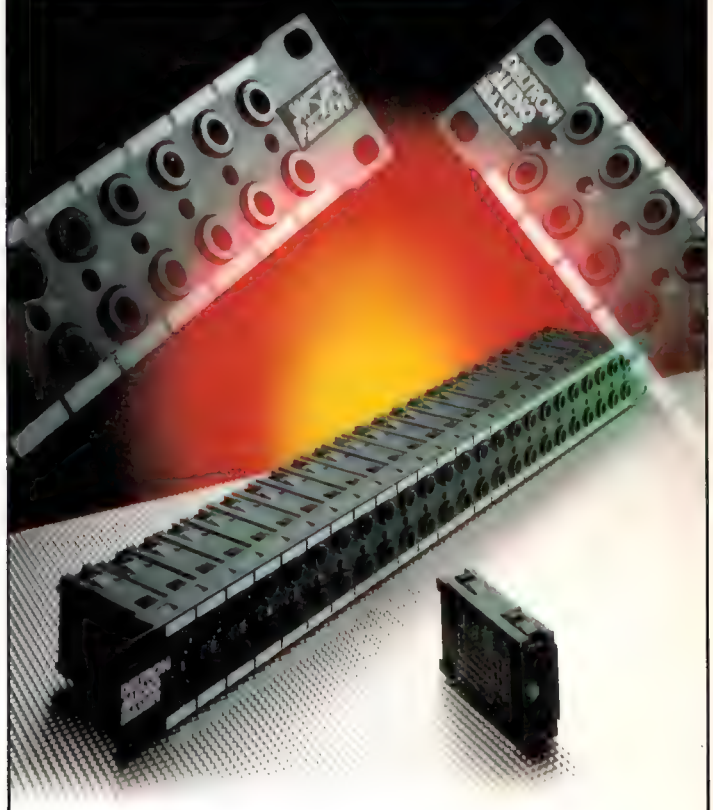
Sound2Midi is an ideal composition and educational tool for singers and instrumentalists who prefer to use their chosen instrument to keyboards or manual MIDI entry.

To order or for further information contact AudioWorks Ltd.
Tel: 0181-445 4331 Fax: 0181-445 4442
e-mail: sales@audioworks.com
Visit our Web site at http://www.audioworks.com

Distributed in the U.K. by Et Cetera

MODULAR SWIFTPATCH

RRP £49.90*



The new Swiftpatch system, part of the DELTRON AUDIO MASTER range, is the answer to your patching problems...

MODULAR GROWTH

The 19" rackmounted panel holds interlocking sealed jack modules (available in packs of six) to allow up to 24 channels in a 1U unit. Each module has four back-to-back 3-pole 1/4" sockets for stereo, balanced or mono signal patching.

THREE FUNCTIONS IN ONE

Half-normalled (which can be a splitter when fed from the front) or straight-through configuration is optional for each module by squeezing the release clips, removing and rotating the module and clicking it into place. Colour coding, visible through the panel, indicates the normal mode.

UNBEATABLE TECHNOLOGY-EXCEPTIONAL PRICE

Internal connections are IDC hard wired for electrical reliability by eliminating the problems of vibrations fatigue or dry joints associated with solder or PCB systems. The price?... **£49.90** (RRP) for a complete panel, or £9.50 for the panel and £10.10 per 6 modules... a very affordable solution. (*All prices exclude VAT).

SOUND CONNECTION SOUND PERFECTION

To order Swiftpatch, contact one of our MAIL ORDER stockists below quoting reference MIX/DEC.

Canford Audio	Tel 0191 415 0205
Composite Video	Tel 0181 641 4044
Roxburgh	Tel 01724 281770
Studiospares	Tel 0171 482 1692
VDC	Tel 0171 700 2777

DELTRON COMPONENTS LTD
A member of the DELTRON ELECTRONICS GROUP

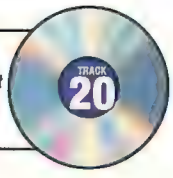
PETSOUNDS

No. 4: Blondie 'Heart of Glass'

Trevor Curwen recreates *that* analogue sequencer sound, and discovers a bunch of other useful tricks along the way

This month's *Petsounds* is quite topical in view of the revival of interest in '70s disco, and is in response to a request from *The Mix* reader Tony Johnson from Leeds. He writes: "Blondie's 'Heart of Glass' is one of my all-time favourites and I've always liked the 'digger-digger-digger' sound in the backing track. I assume the sound is made by some sort of sequencer but is there any way to get a similar effect without using one?"

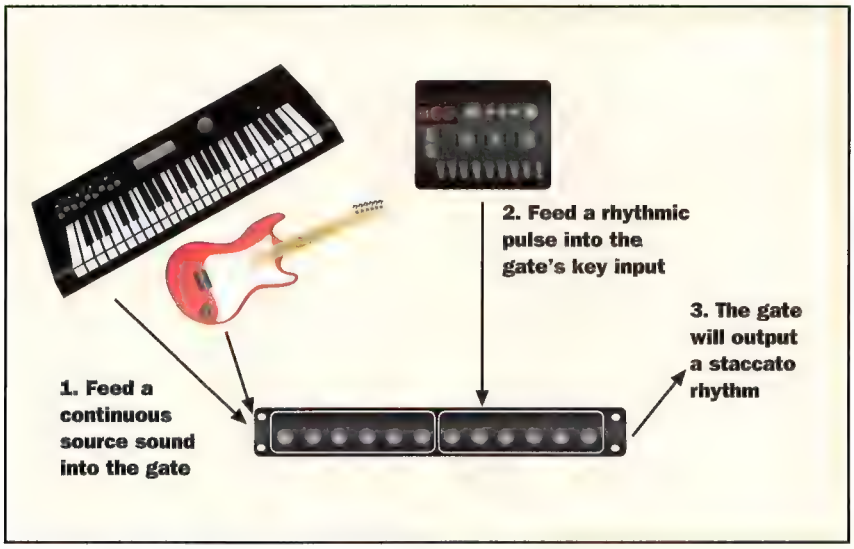
Check out just what you can do with a noise gate and a bit of technique...



'Heart of Glass', produced by Mike Chapman, was a No.1 hit in 1979 and the pulsing sequencer sound is made of 16th notes running at 120 bpm. Anyone with a sequencer can program this type of rhythm quite easily with a string of 16th notes assigned to an appropriate sound, but this type of sound can also be created using a noise gate. In fact, even if you have a sequencer this is worth trying out; a lot of variations in sound can be achieved with the gate, and the technique can be used to cut up guitar tracks as well as keyboards.

The key is to put a continuous sound or drone through the noise gate and chop that sound up with a rhythmic pulse fed into the gate's key input. Each time the rhythm pulse is present at the key input the gate opens, allowing a portion of the continous sound through, effectively chopping it up and creating a staccato rhythm. (For you non-vegetarians, imagine

n Dickson/Redferns


2. Feed a rhythmic pulse into the gate's key input
3. The gate will output a staccato rhythm
1. Feed a continuous source sound into the gate

The signal flow: from cow to sausages via mincer

putting a whole cow into a mincing machine and a string of sausages coming out the other end.)

Now, the rhythmic pulse fed into the key input has to come from somewhere, and as we are trying to do this without a sequencer, the obvious choice is a drum machine. (If Mr. Anorak wants to write in and tell us that, actually, a drum machine is a sequencer of sorts, then we say yes, thank you, now piss off!) Should you have a sequencer, use it to trigger a drum module. Now, for your rhythmic pulse, program a cycled loop of 16th notes and use a short sharp sound such as a snare, sidestick or closed hat.

Setting the gate

We are using the popular Drawmer DS201 noise gate; but any gate with a key input and similar front panel will do the trick.

First off, set the gate's filters so that they have no effect (turn the LF control fully anti-clockwise and the HF fully clockwise) and set the gate's key source switch to External and the function switch to Gate. Feed the continous signal that is to be chopped up through the noise gate – either plugged in directly or with the noise gate on the insert of the appropriate desk channel. Switching the output switch momentarily to Bypass mode should let you hear the continuous sound.

Next, take the output from your drum machine or module into the key input of the gate and start the rhythm. Switching the output switch to Key Listen mode will let you hear the drum sound to check it is coming in. Now set the output switch back to Gate.

Now is the time to set the gate controls to get the desired effect. The range control determines how much sound can pass through the closed gate and in this case we initially want no noise to pass through, so the range control should be set to fully anti-clockwise.

The setting of the envelope controls (Attack, Hold and Release) is crucial in getting the effect to work and shaping the actual sound. These will work over quite a small range, so set them all to minimum (fully anti-clockwise) to start with.

Now start bringing the Threshold Control up from fully anti-clockwise until you hear some sound, which should be the continuous sound cut up into equal short segments. The three coloured LED's on the Drawmer gate will indicate that the gate is opening and shutting, so watch these and use your ears to get the correct effect. If you roll the threshold too far clockwise you will get the continuous sound with the gate staying open.

Now that the gate is opening and shutting correctly, it's time to tweak the envelope of the cut-up sound using the Hold and Decay controls. Turn them clockwise until you get longer bursts of sound; turn either of them too far and the sound will become continuous again.

The Attack control is next. At its minimum setting each burst of sound will have a clicky attack to it. Moving it clockwise lessens and removes this click, giving a more rounded sound.

Now you can fine-tune the envelope of the new sequenced sound. The Attack, Hold, and Release controls work together to create variations on the sound, so tweak them until it sounds how you want it. Different variations can also be attained once the envelope controls are set, by ➤

Use the Drawmer DS201, or any gate with a key input to get *that* sound

SWITCH TO...
...PROFESSIONAL MODE
ULTRAPATCH PRO PX2000
Too many Patchboys are a dime a dozen. On some, you have to reposition circuit boards. On others you actually have to alter conducting paths and resolder them just so you can adjust the patchbay's functions to your specific needs. We know that no one's happy about that kind of reconstruction so our engineers figured out a better way to go. Every channel on our new ULTRAPATCH PRO PX2000 has a designated switch which lets you choose between "parallel", "half-normalled", "normalled" and "open" for maximum flexibility. Anytime you want, on all 24 channels. But that's not all you also get high quality jacks, a rugged steel housing and world-class ISO9000 certified manufacturing - guaranteed professional reliability from top to bottom. Why? Because it's Behringer.
For more information visit our web site:
http://www.behringer.de/eng/products/mixer-d/px2000.htm
We'd be pleased to welcome you
PARALLEL
HALF-NORM.
NORMALLED
OPEN
CH PRO
Get more information about our entire product range and the interactive world of BEHRINGER!
Hotline +49(0)2154-920666
Internet at http://www.behringer.de
Copyright BEHRINGER 1998
BEHRINGER

Sequencers of the '70s (clockwise from top left): Oberheim Mini-Sequencer; Sequential Circuits Model 800; ARP 1600; Moog 960

➤ increasing or decreasing the threshold.

The previously-mentioned range control, which has been set to allow no sound through the closed gate (hence allowing the continous sound to be cut up into discrete segments) can be advanced clockwise to produce a less extreme effect. Set in the right position it's quite possible to achieve a tremolo sound similar to that found on a Vox AC30 guitar amp and heard on tracks like The Smiths' 'How Soon Is Now? ' The three different tremolo speeds found on AC30s can be approximated by keying in with 16th notes at 84, 98 and 113 bpm.

Playing around

This technique can be applied in a variety of ways, as you can hear from the examples on the cover CD. The original sound does not necessarily have to originate from a keyboard; rhythm guitar, either already on tape or played live through the gate lends itself to the effect (Example 2). As for keyboard sounds, there are various options available; the continuous sound could just be played live, or in the case where a drone based on a particular root note or chord is to be used throughout a track, the key(s) could be taped down with a piece of gaffa tape. Using the gate to cut up a sequenced keyboard sound throws up various options – one long keyboard note could be used, but for sounds with a strong initial attack, a note every bar or half-bar would add to the rhythmic emphasis (Example 3 and 4).

Treating the cut-up sound with effects can create some interesting er... effects. Putting the sound through a phaser or flanger before it reaches the gate is a good idea, as any noise from the effect is cut each time the gate closes. In Examples 5 and 6 the sound has been put through a flanger.

If a synth sound can be manipulated in real time while playing, it can create interesting variations and movement in the sound. Example 7 is the sound of an analogue synth with its filter sweep controls being tweaked.

Triggering the gate with steady 16th notes works fine, but different rhythm patterns give equally good results (Example 8). Keying the gate with drum sounds of different loudness (either the same drum sound with different velocities, or different drum sounds) can also produce interesting variations. When using different velocities or drum sounds the setting of the gate threshold control becomes more crucial (as lower velocities and softer drum sounds will not open the gate at low threshold settings) so a bit of experimentation is necessary here. Example 9 illustrates the gate being keyed by a snare drum pattern with random velocities.

For anyone without a drum machine, the gate can also be keyed from recorded rhythmic sounds. A steady bass drum will do the trick and if it doesn't play often enough, it can be fed to a delay. Set the delay up to play repeats in time with the track, and then the gate can be keyed from the output of the delay.

For those without a noise gate, drum machine, or sequencer, the other option is to play it live. Now, playing 16th notes manually at 120 bpm is not at all easy, but playing eighth notes is a little more likely. Use a digital delay set to repeat once at the correct timing to play every second note in the sequence (at 120 bpm the delay time would be 125 ms). This will also work with sequenced notes and with the cut-up notes coming from a gate's output. Example 10 has the gate being keyed by 8th notes and the output of the gate sent to a digital delay to fill in the extra notes; with the delay fading out towards the end.

Sorry if all this sounds a little too much like *Blue Peter*. Next month we recreate Pink Floyd's *Dark Side of the Moon* with an empty washing-up liquid bottle. ™

BLONDIE
PARALLEL LINES

The vibrant New York punk scene of the mid 1970s threw up some great bands, notably The Ramones, Talking Heads, Television and probably the most commercial of the bunch... Blondie. Formed in August 1974 by former Playboy Bunny Debbie Harry and her boyfriend Chris Stein, Blondie were discovered by producer Craig Leon while he was working as an A&R scout for Sire Records. The now-legendary CBGB's club was at the centre of the New York scene and a live at CBGB's album was being made for Atlantic records in 1976, supervised by Leon. Blondie, by virtue of living across the street from the club became the soundtrack band for the recordings and this led to them working extensively with Leon, who had formed an independent production company with Richard Gottehrer.

Blondie's eponymous debut album was released in early 1977 on the Private Stock label, with production credited to Gottehrer, and the band's contract was bought out by Chrysalis in August 1977. A subsequent single 'Denis Denis' reached No.2 in the British charts early in 1978, and was followed by the second album *Plastic Letters*.

For the third album, *Parallel Lines*, production duties were taken on by Mike Chapman, who had achieved considerable success with songwriting and production partner Nicky Chinn in the British Glam scene with acts like Mud and Suzi Quatro. Talking on the BBC radio series *The Producers*, Chapman stated that it took a while to gain the band's trust but that eventually they hit it off, going on to work on three albums in total.

***Parallel Lines* became Blondie's biggest-selling album and 'Heart of Glass', the third single, topped the charts on both sides of the Atlantic. Personnel were Debbie Harry (vocals), Chris Stein (guitar), Jimmy Destri (keyboards), Clem Burke (drums), Nigel Harrison (bass) and Frank Infante (rhythm guitar). A re-formed Blondie are currently recording a new album with Craig Leon.**

AREA 51 UK
advanced audio. sys

AREA 51 UK HAS THE ANSWER

DIRECT ADVERTISING EXPO

Hard Disk Recording & Sequencing is a fast moving specialist field. It is important that the system you choose is going to enhance your creativity and not force you into a technical turmoil, leaving you helpless. Area 51 UK has the answer. We are here to offer the latest information and the best advice available.

LET US CONCENTRATE ON THE TECHNOLOGY, WHILE YOU CONCENTRATE ON THE CREATIVITY.

The Area 51 Computer Systems.

Our range of computer systems start from only £1399.00 inc VAT & UFO. (This month's Unique Free Offer) and with our interest free, Deferred or Commercial Finance packages, you may choose to pay little as £58.00 per month. Below are just three examples of the systems we sell. Please call the Area 51 UK Sales Office on 01442 235151 for more details.

The Area 51 Training Seminar

Buy a system from us and we'll teach you how to use it.... ....Free Of Charge. With every complete Vst system we offer a free lesson, covering the main aspects of digital recording. From Wav Editing to Effects Processing with some production tips thrown in for good measure. We want you to feel confident in using your equipment straight away.

SYSTEM #1

Intel Pentium P11 266MHz PC
PCI/AGP SE440BX M/Board
32Meg SDRam
4.3Gb UDMA Hard Drive
ATI 4 Meg Graphics Card
32 x Pioneer CD Rom
15" SVGA Monitor
Turtle Beach Montego
(18 bit Full Duplex Sound Card)
Steinberg Cubase VST
& UFO

From Only
£58
0% Interest Free

SYSTEM #2

Intel Pentium P11 300MHz PC
PCI/AGP SE440BX M/Board
64Meg SDRam
6.5Gb UDMA Hard Drive
ATI 4 Meg Graphics Card
32 x Pioneer CD Rom
15" SVGA Monitor
Yamaha DSP 2416 Sound Card
2 x Yamaha AX44 Interfaces
(8 in & 8 out Analogue units)
Midi Terminal 64
(64 Midi channels with SMPTE)
Steinberg Cubase VST
& UFO

From Only
£79
0% Interest Free

SYSTEM #3

Intel Pentium P11 333MHz PC
PCI/AGP SE440BX M/Board
64Meg SDRam
6.5Gb UDMA Hard Drive
3.5Gb UDMA Hard Drive
ATI 4 Meg Graphics Card
32 x Pioneer CD Rom
17" SVGA Monitor
Lexicon Studio 24 bit PCI Card
12T Interface & PC90 FX Card
Opcode 64X Midi Patch Bay
Steinberg Cubase VST
Steinberg Wavelab V.2
& UFO

From Only
£175
0% Interest Free

The Shortcut To Creativity

AREA 51 UK advanced audio. sys

UNIQUE FREEBIES OFFER

Area 51 UK will give you an afternoon of tuition FREE of charge on all VST systems. We will also include a copy of Sound Forge XP, again FREE of charge on all systems. This offer is unique to Area 51 UK customers.

Tel. 01442 235151

Fax 01442 261113 email area51uk@aol.com

NMS '98

Visit us at the National Music Show on 27th, 28th & 29th Nov. Stand No. 204 (By the entrance)

Come and see why Area 51 is fast becoming the standard in music PC's.

MAC TROUBLE SHOOTING

YOUR MAC MUSIC PROBLEMS BLOWN AWAY!

Ian Waugh **administers the antidote to the most common Mac problems encountered in the recording studio. Open wide...**

1 I can't hear anything from my MIDI gear.

It may seem obvious, but check that all audio and MIDI cables between synths, sound modules, amps, mixers and speakers are working and connected correctly. Play the module's demo tune or play it via a MIDI keyboard to make sure the audio connections are working before you blame your computer set-up.

Make sure the MIDI interface is installed correctly and properly connected to the Modem or Printer port. If you have a specialist MIDI interface that requires drivers, make sure they are installed correctly.

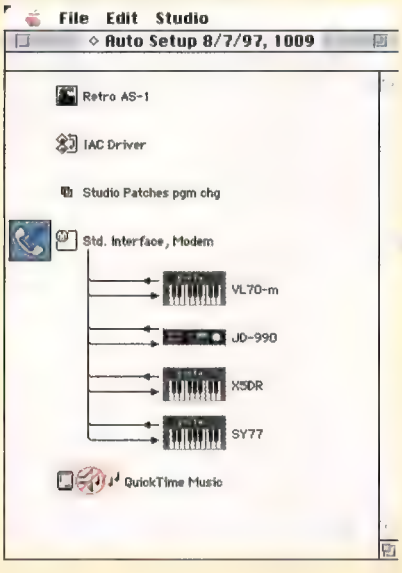
If your music software requires Apple's MIDI Manger, OMS, or FreeMIDI, make sure it's correctly installed and set up. OMS, for example, can be tricky to set up, so read the manual carefully. Most systems will work with all of them installed, but if you don't need them, don't install them.

With most sequencers you must select the MIDI output port either for individual tracks or for the entire sequencer. Make sure the correct port is selected. For example, don't select the Printer port if the interface is plugged into the Modem port! In Emagic's Logic make sure the Environment is set up correctly to route data to the correct output port.

You may have to set the speed of the port. Check your documentation. If in doubt, select 1MHz. Some 68040 Macs, such as the Quadra 950, had faster (non-standard) serial ports and require a Serial Switch Control Panel to make the port compatible with music software. If you have such a Mac, make sure the Serial Switch is set to Compatible.

If the sequencer has a MIDI Output indicator, check that it's working during playback. If not, the MIDI tracks may be empty of data or muted. Check that the tracks don't contain a Zero Volume instruction and that the Mixer faders have not been pulled down.

Keep your hard drive in good shape by defragmenting regularly with a utility such as Norton Utilities



2 I can't hear audio files during playback.

Check all the audio connections, the amp, the speakers, and so on. Check the Sound Control Panel and the Monitors & Sound Control Panel to make sure the output is not muted and set to a reasonable volume. Some sequencers let you switch off audio functionality to preserve processing power; make sure it is switched on.

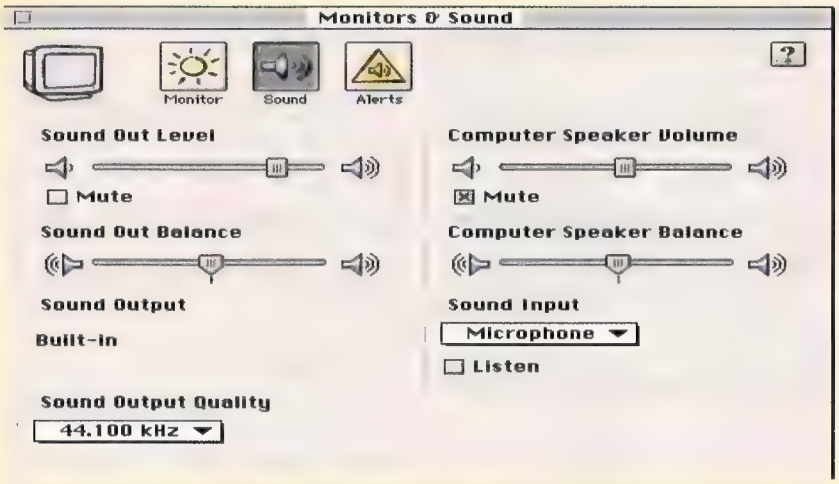
Also check that the correct audio system is selected. Studio Vision, for example, lets you choose DAE or Sound Manager. In Cubase VST you need to select the correct ASIO device in the System dialog (Audio Setup menu). If you have more than one audio output in your system, make sure the tracks are routed to the correct ones.

A small check: Make sure the audio channels have not been muted in the Mixer and that the Mixer volume fader has not been pulled right down.

3 I can't record into my sequencer from my MIDI keyboard.

The problems that prevent output can also prevent input, so run through the checks in Solution 1.

If you're using OMS, make sure an input is selected. If you're not, and your



Check the Monitors & Sound Control Panel to make sure the Mac's audio output is not muted, and is set to a reasonable volume

sequencer gives you a choice of input sources, make sure the correct one is selected. In the Cubase MIDI System Setup window, for example, you must select the Modem and/or Printer Input.

If your sequencer has a MIDI Filter, make sure it's not set to filter out Note messages.

4 My sequencer becomes unstable and I'm experiencing lots of timing problems.

This can happen for several reasons. First of all, it's imperative that you set up the software according to the instructions, particularly in the MIDI and Audio set-up screens.

Make sure your Mac is fast enough for whatever you want to do. A common cause of timing problems is asking the sequencer to do more than the Mac is capable of. Trying to run too many real-time digital audio effects, for example, or play back too many digital audio tracks, will cause problems.

Because sequencers run in real-time, in order to maintain accurate timing they need access to as much processing power as possible, and they should not be interrupted by background processing. Switch off the screen saver, networking and so on, and don't leave programs running in the background. Switch off Virtual Memory in the Memory Control Panel. This should rarely be used with any program. If you're short of RAM, buy some more; it's actually quite cheap at the moment.

Some versions of the Mac OS have been known (or suspected) to cause timing problems too, so check your OS version with your sequencer's distributor and ask if they have had reports of timing problems with it.

You might try running OMS if you're not already. This has been known to fix some MIDI timing problems. It's a free download from the Opcode website (see Solution 16).

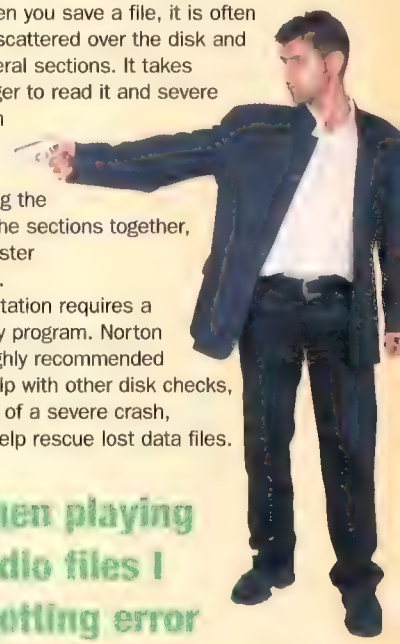
6 I'm starting to get audio drop-outs during playback, and while recording audio the sequencer stops recording.

The most common cause of this problem lies with the hard disk, particularly if the problem has just materialised. But as well as trying the suggestions below, check the system optimisation described in the previous answers. Also, if your Mac has an IDE interface for the hard disk, be aware that this could slow down data transfer and cause drop-outs.

Two common causes of these problems are disk fragmentation and running out of disk space. It's very easy to fill your hard disk with audio data during a busy session. Check the amount of free space in the Header of the disk window. If it's not shown, open the Views Control Panel and check the 'show disk info in header' box. Be careful not to get to the stage where the disk is completely full as this could lead to problems booting and running the Mac.

You should also defragment the drive regularly. When you save a file, it is often fragmented, scattered over the disk and saved in several sections. It takes the drive longer to read it and severe fragmentation can cause dropouts. Defragmenting the drive brings the sections together, making for faster data retrieval.

Defragmentation requires a suitable utility program. Norton Utilities is highly recommended and it can help with other disk checks, too. In cases of a severe crash, Norton can help rescue lost data files.



7 When playing audio files I keep getting error messages saying Disk Too Slow, and playback stops.

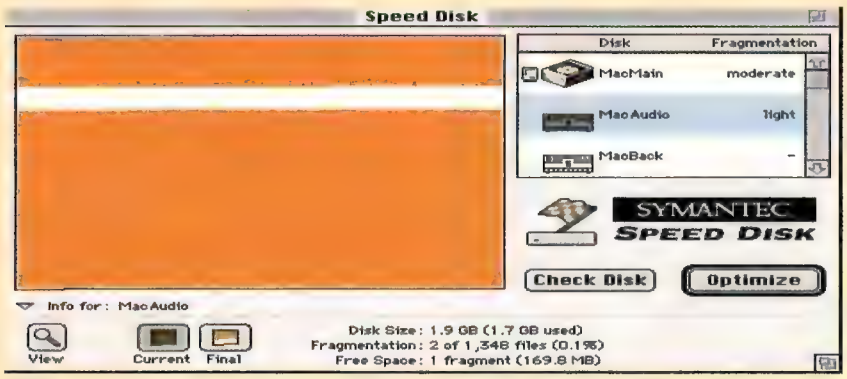
5 The audio tracks seem to run out of time with the MIDI tracks.

This may be caused, and cured, by various combinations of drivers and internal program settings. Again, make sure the sequencer is optimally set up according to the program's instructions.

One simple thing to try is to put a bar or empty audio at the start of the piece so the system starts 'playing' the audio before any MIDI parts.

Will have a MIDI to Audio Delay setting in the Audio System Setup dialog, which is designed to compensate for timing differences between the two. Setting it to a positive value will delay MIDI playback in relation to the audio. It also has a 'Low MIDI timing' check box which gives MIDI processing a higher priority than audio processing. You should check this if using OMS, but make sure the CPU Over indicator in the Audio performance window doesn't light up. If you are syncing with an external source and experiencing timing problems, refer to the Getting Into The Details manual from page 570 onwards. There are several pages of invaluable information there.

In Logic's Compatibility window (Preferences) you should select the new Phase Control Timer Model, but if this seems to be causing problems, revert to the Old Timer Model. In Audio Extensions (Preferences) in the Mac AV setting there are options to set Record and Playback Delay times to help sync audio to MIDI tracks.



OMS can sometimes helps resolve timing problems, but make sure it is set up correctly

This message seems to indicate that there's a problem with the hard disk, but it can sometimes be fixed in other ways. The message is likely to appear if you are trying to play more audio tracks or run more real-time processing functions than the system can handle. A faster drive may well sort the problem but there are a few other things you can try, too.

Make sure the drive is defragmented (see question 6) and check the Virtual Memory setting (see question 4). Make sure the software is optimally set up (see above questions). Reduce the number of real-time effects that are running. If you must use them all, apply them to some tracks off-line, bounce them to disk, load them and play them as normal un-processed files. Switch off any programs that 'lurk' in the background, such as screen savers or Norton CrashGuard.

8 What Mac do I need to run my sequencer XYZ?

This can vary from sequencer to sequencer, so contact the distributor for details of the recommended systems. However, beware of the minimum recommendation because these are often just that, and don't give full rein to a program's facilities. There is often a large difference in system requirements between using a sequencer for MIDI only and using it for digital audio recording.

Generally, the faster and higher-spec'ed the Mac, the better the software will perform. Steinberg's recommendation for Cubase VST is any PowerMac from a 601/603e, but the recommended machine is a G3 running at 200MHz or faster. The minimum speed is 120MHz. You also need a 2nd level cache of 256K or 512K. This speeds up data transfers. The minimum amount of RAM is 48Mb but 64Mb or more is preferable. These are fairly typical recommendations for most sequencers, although if you only want to run a MIDI sequencer, the requirements are far less demanding.

Beware of the new iMac. The specs look good and the machines are undoubtedly excellent value for money, but they don't have a floppy disk drive. Amazing but true. Many pieces of music software use a hard disk install for which you must have a floppy drive. You can, however, buy a USB floppy drive, which will probably cost around £100-120. Also, the iMacs lack a PCI slot so you can't plug in a digital audio card; and they come with 32Mb RAM, which is really not enough for serious music use, although this can be upgraded.

9 Which system software should I use with sequencer XYZ?

Again, check with the distributor. Some versions of the Mac OS have caused problems with MIDI and audio software (see Solution 4). Steinberg recommends OS 7.6.1, OS 8, or OS 8.1, but does not currently recommend reformatting the hard drive and installing 8.1 with HFS+. It also warns that using OS 8.1 with the DAV ASIO driver can cause crackling on some machines, but expects that OS 8.5 will cure this problem.

10 Why doesn't my Cubase VST 3.5 install with OS 8?

Although all Cubase versions are compatible with OS 8, the installer program VISE is not. You ought to upgrade your version of Cubase to 3.52 or 4.0. The upgrade to 3.52 is free.

Alternatively, you can install your previous software with, say OS 7.6.5 or 7.6.1, then install Cubase. Make sure everything is running smoothly, then update to OS 8 using a clean install; you will see on your hard drive a Previous System folder which is where Cubase 'lives' while running OS 8. But an upgrade at least to 3.52 is recommended.

Note, too, that this will not work on a G3 unless you have an external hard drive.

11 Do I need a MIDI interface to record MIDI data into my sequencer?

Generally, yes. The Mac does not have a built-in MIDI interface. However, some keyboards and sound modules have a To Host interface, which can be connected directly to the Mac's Modem or Printer port. If this was on a keyboard, for example, you could then use the keyboard's MIDI Thru to channel data from the Mac to a sound module. It's fine for small set-ups, but it's not as flexible as a dedicated MIDI interface.

12 Do I need a soundcard to run digital audio software on my Mac?

If you have a PowerMac, then in most cases, no. PowerMacs have built-in DSP facilities that enable you to record and play back 16-bit audio at 44.1kHz. The quality is generally very good, but comments from users suggest that it can vary from Mac to Mac. Theory has it that the DSP was not intended to be a 'pro' feature so it was not subject to rigorous quality control. But many users find it very acceptable, so try it before splashing out on a dedicated digital audio card.

If you're running Cubase VST, use the Apple DAV ASIO device driver, which you select in the Audio System Setup dialog.

If you don't have a PowerMac, then you will need a digital audio card such as Digidesign's Audiomedia II, but there are three major considerations here. Most current digital audio cards have a PCI interface, whereas most non-PowerPC Macs use the older NuBus connector. If you have a pre-PowerMac, the cost of the

card could be more than your Mac's worth, so see if you can pick up a second-hand card. Secondly, some software will only run on a PowerMac, so make sure the software you want to run will do so on your Mac. Thirdly, you cannot use a NuBus card in a PCI slot, so if you upgrade your Mac you'll have to ditch the card and buy a new one. In all, it may be worth considering buying a PowerMac.

If you have a PowerMac, there are several digital audio cards to choose from. They provide higher quality audio than the Mac's built-in audio facilities and often have several I/Os and a digital interface.

The biggy is Digidesign's ProTools, but they have recently announced the less expensive Project II, a standalone 24-bit digital audio card designed for use with most popular sequencing and digital audio recording software. Cheaper still are Digidesign's Audiomedia cards. Other cards to look at are the Korg 1212I/O, Lexicon Studio, Lucid PCI24, MotU2408, Sonorus and the Yamaha DS2416.

13 During playback, MIDI speeds up to 250+ bpm.

This is caused by a MIDI Clock loop that can occur if too many devices are transmitting MIDI Clock data. For example, if a MIDI Clock slave is transmitting Clock data itself, this can be picked up by the Clock master, which can pass it on to the slave, speeding up each time round the loop. The easiest way to avoid this is to make sure that only one device is transmitting MIDI clock.

14 Can I use my internal hard disk to record and play back audio?

Yes, but you will find that a second drive will provide better performance. Most Macs use a SCSI interface for their hard drives, but a few older ones did resort to IDE drives. SCSI gives much better performance. Check the speed of the interface on your Mac. If it's a SCSI 2 or 3 interface, for example, and you get a comparable drive it will be able to transfer data more quickly, allowing you to play back more audio tracks at once.

Also, opt for an AV drive if possible. Standard drives often take time out to perform internal housekeeping, and suspend data transfer as they do so. AV drives don't, and provide continuous data transfer. Having said that, a fast, standard drive will generally work well as drive technology has been improving. The advantages of AV come to the fore when you're running the system at its limit.

Steinberg recommend formatting the drive with an asynchronous driver, preferably using FWB Hard Disk Toolkit.

A known problem exists with VST and PowerComputing's PowerCenter Pro 210 Macs. This system will not play back correctly from an internal hard drive. The problem seems to lie with a combination of the computer's PCI bus and the Adaptec SCSI card inside it. The solution is to use an external SCSI drive connected to the Mac's SCSI connector, not the card's connector. This should work fine, although you don't get the extra speed the SCSI 2 card should have provided.

15 I have Cubase Score, but the Score menu is greyed out.

This menu only becomes active when the Score edit window is open. Highlight a MIDI track, select Score from the Edit menu, and the Score menu will miraculously become operative.

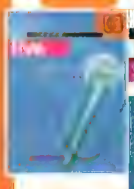
16 How do I get the latest version of my sequencer XYZ?

First, you should always register your software. Then whenever a new version comes out, the distributor will let you know about it. However, many programs also have a number of sub-releases, enhancements, or bug fixes, which are not so widely publicised. The easiest way to keep track of these is to visit the developer's website where such updates are nearly always posted and can be downloaded free of charge. Here's some sites to bookmark:

Steinberg: ftp://ftp.steinberg.net
http://www.steinberg.de/
http://dialspace.dial.pipex.com/town/road/gbp97/
Emagic: http://www.emagic.de/
Mark of the Unicorn:
http://www.motu.com/
Opcode: http://www.opcode.com/
Coda: http://www.codamusic.com/
Bias: http://www.bias-inc.com/

BOOKS ON SOUND RECORDING, EASY TO UNDERSTAND GUIDES AND A UNIQUE TUITION SERIES

music technology
a survivor's guide
£14.95 BY PAUL WHITE
highlights common problems in recording and mixing music, solves equipment dilemmas and does some technical trouble shooting



live sound for the performing musician
£11.95 BY PAUL WHITE
a practical guide to equipment and sound for small to medium-sized gigs from a musician who sounds better live than his abilities should allow

recording & production techniques
for the recording musician
£12.95 BY PAUL WHITE
demystifies the various techniques used to record and produce contemporary music

home recording made easy
professional recordings on a demo budget
£11.95 BY PAUL WHITE
choosing home recording equipment carefully and using it properly can produce release quality recordings

MIDI for the technophobe
£11.95 BY PAUL WHITE
introduces the beginner to the concept of MIDI without confusing jargon and by way of analogy with familiar technology such as TV and the telephone

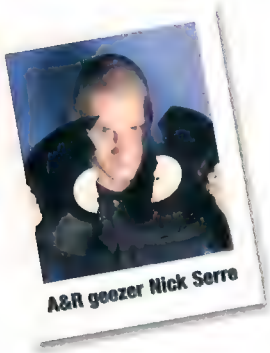
To order a title direct please ring our credit card hotline on
0800 731 0284
OR WRITE TO SANCTUARY DIRECT, FREEPOST CL3713, GREAT DUNMOW, ESSEX CM6 1XX

FOR MORE INFORMATION ON TITLES FROM SANCTUARY PUBLISHING LIMITED, PLEASE CONTACT SANCTUARY PUBLISHING LIMITED, 32-36 TELFORD WAY, LONDON W3 7XS
TEL: +44 (0) 181 749 9171 FAX: +44 (0) 181 749 9685
E-MAIL: SPUB@EASYNET.CO.UK
WEB: WWW.SANCTUARY-PUBLISHING.COM

A&R dept

Sponsored by

WIN free recording media! Every month, the sender of the best demo we receive gets to choose a box of recording media from the HHB line of products. DAT, CD-R, ADAT – the choice is yours...


A&R geezer Nick Serre

Welcome to the hallowed depths of the A&R Dept, where *Nick Serre* and his record industry pals scrutinise your demos for signs of musical and production talent

LEVEL PLAYING FIELD
DEMO

Ex-punk rocker and all-round eccentric Ryoko Kuwajima has provided three cuts which demonstrate her quirky approach wonderfully. Opener 'The Myth Accompanied By H*enry' is a disturbingly syncopated workout, similar, in a way, to some of Bjork's arrangements. Overflowing with energy, and giving the listener no clues as to where it'll be taken next, it combines manic vocal samples and the most incessant drum track I've heard in a long while. Add to that what sounds like a radio being (nearly) tuned in, and it's a wonder that the cacophony doesn't sound like a complete mess. To learn that Ryoko works at a recording studio gives the answer to why. Brilliant use is made of panning and EQ, and although she says that she'll give a tenner to anyone who can dance to it, I can see it going down a storm in some of the more unconventional clubs. 'As Ian Jokes' (geddit?) is in a similar vein, with more expertly selected vocal samples and Asian instrumentation subtly employed. Superb. 'An Enriched Killer' continues the trend, and makes the whole effort utterly cohesive, in a mental kind of way.

Verdict: Eclectically excellent.....7/10
More from: Ryoko Kuwajima Tel: 0171 483 3923

JOSEPHINE WILLIAMS
EROTICA

This was a lovely package that landed on my desk on a bleary Monday morning. A book of 'erotic' poetry – for a moment I thought I had a secret admirer. No such luck on that score, but the accompanying tape made up for it. Using the texts of her poetry, Josephine has penned three dance/trance based tracks, which are as musically sexy as the book. Although the tracks are not listed, being a true professional, I read the entire book to tally them with the tracks. So with that settled, 'Quiver' is a superbly low-key effort, which is perfect for letting Josephine's sultry, seductive vocals shine. Ironically, it has shades of Madonna's 'Erotica', and touches of Kate Bush's quieter moments. The remaining two tracks are a little busier in approach, and offer a disparity in styles whilst remaining cohesive. To promote her book, Josephine has had some of the tracks played on the *James Whale Show* and Kiss FM during interviews, and as a combined project, it works an absolute treat. But enough of my waffle, I'm off for more reading, as Josephine suggests, 'under the bed covers with a torch and tissue.'

Verdict: Phwoooorrrrr.....8/10
More from: Josephine Williams Tel: 01793 533876

A&R CHECKLIST

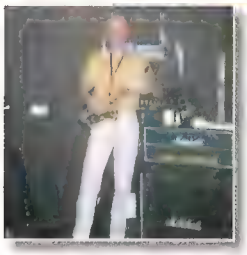
We receive a mountain of tapes every month, so to maximise your chances of having your demo reviewed (and if you're really good, getting on *The Mix* CD) you need to provide the following:

- **Decent quality cassettes, preferably chrome (type II), CD or DAT**
- **A kit list of the gear used to produce the demo**
- **A biography of the act. We want to know all about you**
- **Artwork. This can be a picture of the act, or a groovy graphic**
- **Lastly, send us cool music that deserves to be going places...**

Unsolicited packages might be accepted at the following address:

A&R Dept, The Mix, Future Publishing, 30 Monmouth St, Bath BA1 2BW

HOMEGROWN MUSIC COMPANY
JUNGLEGRUNGE



Sava Kuzmanov, a.k.a. Homegrown Music Company, has a most charming approach to being a complete musical maverick. Junglegrunge, is, sadly, a one-track offering, but what an offering it is. Produced with a good 'ol Ensoniq EPS 16 Plus, alto sax, borrowed 4-track, and not much more, Sava has created a dynamic track which instils a kind of pleasant sense of unease. It's comparable in parts to Miles Davis' brilliant *You're Under Arrest* album, with parts colliding with severe force, yet somehow gelling perfectly. Sava says he likes surrealism in music, and says the track was inspired by the grunge riff he uses (which, by the way, is superb) and the samples of the security guards from the early Shea Stadium Beatles gigs. He's also got a huge range of influences and playing experience which has enabled him to be totally confident when it comes to making off-the-wall surrealist tracks. The commercial viability of Homegrown Music Company is debatable, but whether that's a consideration for Sava is unclear. Whatever, I for one can't wait to hear more of this superbly manic music. So if you're reading this, Sava, send me some more, please!

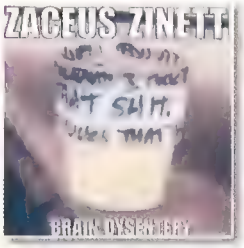
Verdict: Roll me another.....7/10
No contact details supplied

JIM CARMICHAEL
DEMO

Ah, relief time in the form of Jim Carmichael's mellow pop/dance ditties. Jim produces, and with the aid of Doña Peesy's gorgeous dulcet voice, they've turned out three tracks of first-rate *Top Of The Pops* fodder. And here's the best bit: with so much competently-produced yet ultimately dull stuff in this style around, it's a trap Jim is certainly not in danger of falling into. With a fairly minimal set-up, including E-mu E-64, DA88 and a Eurodesk, Jim has obtained a slick and professional-sounding demo. Which is quite an achievement considering that the demo was recorded in a somewhat unconventional manner: equipped with his laptop and sampler, a few ideas and "not a lot of songwriting experience" he and Doña wrote, recorded and mixed two of the tracks supplied here. They're obviously a natural team. The pop formula is firmly in place in terms of verse/chorus arrangements, and that's no bad thing considering the duo should be aiming to be as mainstream as possible. The next logical step to catch record companies' attention would be to get out and play live. This may entail putting a band together, but I have a feeling that it could pay off big-time.

Verdict: A perfect slice of pop.....8/10
More from: Jim Carmichael Tel: 01273 330541

ZACEUS ZINETTI
BRAIN DYSENTERY



Bloody hell! This is scary. In the best possible way, I hasten to add. Imagine Nine Inch Nails on acid, and you're close to Zaceus Zinetti's bag. In creator Tommy Concrete's words, "all chord progressions are shit, so is all melody, groove and every band currently going except Motorhead" and he also suggests that you take acid when listening to this, videotaping the trip, and sending it to your local primary school as a social studies lesson. This man takes things seriously, make no mistake. Musically, *Brain Dysentery* is an hour of sample mania, laced with seriously cut-up industrial beats that make the ears bleed within seconds. Zaceus Zinetti has already had some airplay, and taken his manic stuff out to live audiences in a variety of guises, and what a show that must be to behold. This stuff ain't gonna make the charts. In fact if it did Tommy Concrete would probably kill himself (and everyone who bought it), but there are labels out there, like Earache, who have the individuality and foresight to be serious about this kind of mental abandon. Send it to them, and see what happens, and in the meantime, some more ideas of primary school educational tactics wouldn't go amiss either.

Verdict: Arrrgggghhhhh.....8/10
More from: Tommy Concrete Tel: 01482 351259

DEMO OF THE MONTH

HOOKED
PASSING TIME EP

Sultry, unabashed, and brimming with the most perfect blend of traditional instrumentation and technology – it's a good starting point for Hooked. Opener 'Killing Time' (check it out on the CD) kicks off with a kind of Paul Weller-esque swirly atmosphere with tight and funky rhythm parts, akin to Jamiroqui's more laid-back efforts. Lucy Rogerson's silky tones add kudos to the proceedings and fill you with an amazing sense of warmth. Sorry, I'm getting carried away, but you know what I mean (I hope). The rest of the tracks on offer are of a similar calibre, and include some interesting remixes, notably 'Spaceman (Dream Poets Dub)' which expertly employs trademark huge snare drum and moody, deeeeep bass shenanigans. Superb. These guys know their production techniques inside out; the mixes are spot-on for clarity, and the arrangements are unconventional without being intrusive. Musically, the guys and gals are sympathetic to each other's parts (stop sniggering), and there doesn't seem to be any horrible egos flying. What a welcome change. Hooked have also made quite an impact on the live scene, having already played with bands like The Egg, Cantaloop and Big World Skunk, which should have already impressed some A&R guys (assuming that any turned up). Let's see what our regular industry spokesmen reckon...

More from: Dave/ Lucy Tel: 01242 524596

INDUSTRY VERDICTS

Introspective, downbeat indie. The vocal evokes Shelley Nelson on the TinTin Out/Sundays thing, a comparison reinforced by the somewhat bedsit lyrics. Strengths: the sort of music which can be developed for mainstream radio – and at least it has got proper songs. Weaknesses: the remixes wouldn't convert anyone who didn't like the styling of the originals, which is why you do remixes. And there's lots of flute, infringing Rule 1: NO flutes.

• Stu Lambert, Partner, Zip Dog Records

There is something about this CD which really repulses me. To be fair to Hooked, it is a personal taste thing more than anything else, because they do actually write really good breezy pop tunes in an 'Everything But The Girl meets The Sundays' way. They could do themselves a really big favour by dropping the 'Handbag Acid Jazz' production style, though.

• Sam Winwood, A&R, Sony S2

serious about

music

Full Time Study

- Higher Diploma in Contemporary Music
- Diploma in Contemporary Music

- Funding & Finance Available
- Fully Accredited
- Limited Places Available

Professional Opinion:

It looks good, it sounds good, it even smells good!
(Paul Gilbert, Mr Big)

Course consultants include:

- Kevin Nixon (Hit + Run Music, Kula Shaker)
- Wes (Mushroom Records, Garbage, Ash)
- Steve Harris (Producer, Dave Mathews Band, The Bluetones)

Fender Takamine TRACE ELLIOT Roland YAMAHA AKG ALESIS samson

● Guitar ● Bass ● Drums
● Vocals ● Music Production

Call us today!

for your Free brochure & enrolment details

01483 456788

fax: 01483 456070

Haydon Place, Guildford, Surrey GU1 4LR

ACM
THE ACADEMY OF CONTEMPORARY MUSIC

Gizz Butt @ACM

Paul Gilbert @ACM

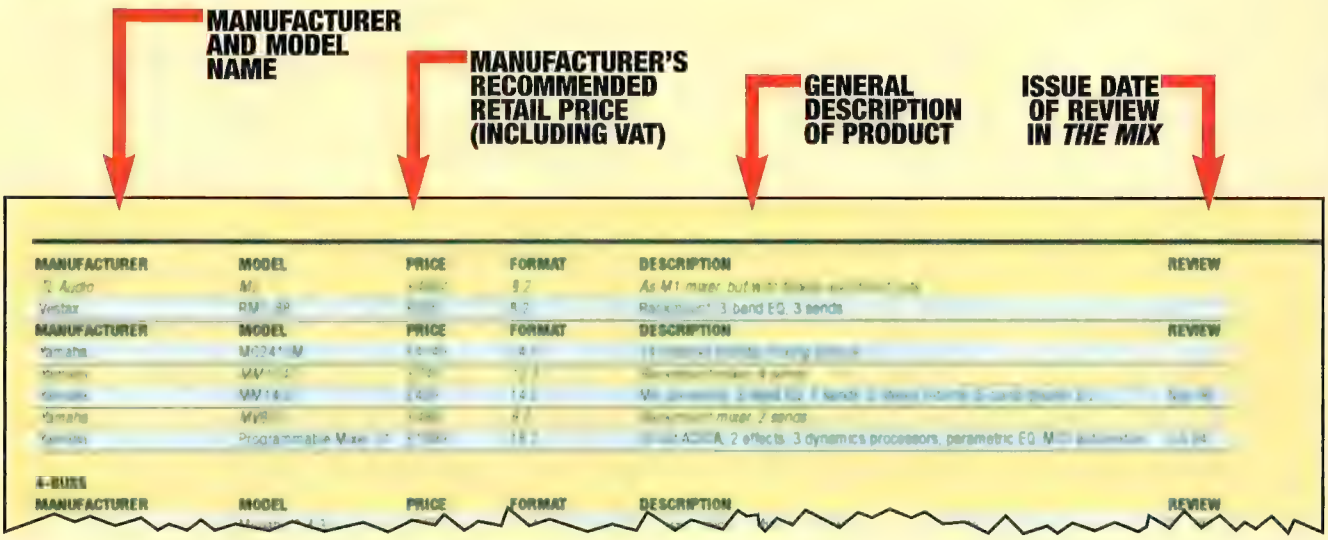
ACM Showcase '98

Ace + Rich @ ACM

Backstage @ Wembley

In the market for some new studio kit? We've made life easier for you by listing every recording product, along with its price and main features...

HOW TO USE IT



WHAT'S IN IT

SOUND GEAR
Synthesizers & Keyboards 06
Workstations 06
Modules 07
Electronic Percussion 09

MICROPHONES
Condenser 10
Dynamic 11

MIXERS
Stereo 13
4-buss 14
8-buss 14

MONITORING
Headphones 15
Power Amps 16
Nearfield Monitors 17
Mid- & Full-range Monitors 18
Active Monitors 18

SIGNAL PROCESSORS
Compressors 19
Delays 20
Enhancers 20
EQs 20
Expanders 22
Limiters 22
Multi-effect Processors 22
Noise Gates 23
Noise Reduction Units 24
Pre-amps 24
Reverbs 24

SAMPLERS
Drum Machine 25
Phrase 25
Keyboard 25
Rack 25

MAC SOFTWARE & HARDWARE
Sequencers 26
Scoring 26
Universal Editors & Librarians 26
Plug-ins 26
Audio Software 27
Audio Hardware 27

ATARI SOFTWARE & HARDWARE
Sequencers 28
Scoring 28
Universal Editors & Librarians 28
Audio Software 28
Audio Hardware 28

PC SOFTWARE & HARDWARE
Sequencers 29
Scoring 29
Universal Editors & Librarians 29
Plug-ins 29
Audio Software 30
Audio Hardware 30

MULTITRACK RECORDERS
Analogue Cassette 32
Analogue Reel-to-Reel 32
Digital Tape 32
MiniDisc 32
Hard Disk 32
Magneto-optical Disc 32

CONTROLLERS & INTERFACES
MIDI Controllers 33
MIDI/CV Converters 34
MIDI General 34
Mac 34
PC 35
Atari 35
Analogue/Digital Converters 35

STEREO RECORDERS
Cassette 36
CD-R 36
DAT 36
MiniDisc 36

THE MIX CONTACTS THE COMPLETE GUIDE TO WHO MANUFAC

3G LTD
3G House, 18–19 Laurence Industrial Estate,
Eastwoodbury Lane, Southend-on-Sea,
Essex SS2 6RH
T: 01702 420645
F: 01702 420647
E: 3Gaudio@compuserve.com

A+F MCKAY AUDIO LTD
Distributing: BPM Studio Technik, Digilab,
Nevaton, Oktava.
The Studios, Hoe Farm,
Hascombe, Surrey GU8 4JQ
T: 01483 208511
F: 01483 208538
E: afm@afmckay.demon.co.uk
W: www.afmckay.demon.co.uk

AARDVARK
see The UK Office
W: www.aardvark-pro.com

ACOUSTIC ENERGY LTD
16 Bridge Road, Circencester,
Gloucestershire GL7 1NJ
T: 01285 654432
F: 01285 654430
W: www.acoustic-energy.co.uk

ADB
see Et Cetera

AKAI (UK) LTD
EMI Division, Haslemere Heathrow Estate,
Parkway, Hounslow, Middlesex TW4 6NQ
T: 0181 897 6388
F: 0181 759 8268
W: www.akai.com/akaipro

AKG ACOUSTICS
see Arbiter Group
W: www.akg-acoustics.com

ALESIS
see Sound Technology
W: www.alesis.com

ALLEN & HEATH
Kernick Industrial Estate,
Penryn, Cornwall TR10 9RU
T: 01326 372070
F: 01326 377097
E: sales@allen-heath.com
W: www.allen-heath.com

AMEK TECHNOLOGY GROUP
New Islington Mill, Regent Trading Estate,
Oldfield Road, Salford M5 4DE
T: 0161 834 6747
F: 0161 834 0593
W: www.amek.com

AMG ELECTRONICS
Distributing: C-ducer.
2 High Street, Haslemere, Surrey GU27 2LR
T: 01428 658775
F: 01428 658438
E: amg@c-ducer.demon.co.uk
W: www.c-ducer.demon.co.uk

AMS NEVE PLC
T: 01282 457011
F: 01282 417282
E: enquiry@ams-neve.com
W: www.ams-neve.com

ANALOGUE SYSTEMS
17 Cannis Road, St Austell, Cornwall PL25 4EB
T: 01726 67836
F: 01726 67836

ANTARES
see Unity Audio

APHEX SYSTEMS
see Stirling Audio
W: www.aphex.com

APOGEE
see Raper & Wayman or Syco Systems

ARBITER GROUP PLC
Distributing: AKG Acoustics, C-Audio, dbx,
DigiTech, DOD, Fatar, JBL Professional, Kawai,
MIDI Solutions, Musicator A/S, Music PC,
Passport Designs, PG Music, Prosonic,
SampleZone, SKB, SoundQuest, Steinberg, TC
Works, Voyetra, Waldorf.
Wilberforce Road, London NW9 6AX
T: 0181 202 1199
F: 0181 202 7076
E: arbiter@compuserve.com
W: www.arbitergroup.com

ARBORETUM SYSTEMS
see Unity Audio
W: www.arboretum.com

ART
see Music Connections

ARX
see Fusion

ATC ACOUSTIC ENGINEERS
Gypsy Lane, Aston Down, Stroud,
Gloucestershire GL6 8HR
T: 01285 760561
F: 01285 760683

AUDIO AWARENESS
Distributing: Copson Data, Digital Awareness,
Solton.
Eurotec House, 31–35 High Road,
Chadwell Heath, Essex RM6 6QW
T: 0181 598 8081

AUDIO-TECHNICA LTD
Technica House, Royal London Industrial
Estate, Old Lane, Leeds LS11 8AG
T: 0113 277 1441
F: 0113 270 4836
E: sales@audio-technica.co.uk

AUDIO TOYS
see The UK Office

AUDIOWORKS
109 Greenway, London N20 8EL
T: 0181 445 4331
F: 0181 445 4442

AUDIX CORPORATION
T: 001 01 503 692 4426

AUTOGRAPH SALES LTD
Distributing: LAB.GRUPPEN.
T: 0171 485 3749

AVM
see Et Cetera

AXIS AUDIO
Distributing: Far, Groove Tubes.
3 Waterloo Road, Stockport,
Cheshire SK1 3BD
T: 0161 474 7626
F: 0161 474 7619

B&K
see Sound Network

BARNES & MULLINS LTD
Distributing: Nobels.
155 Grays Inn Road, London WC1X 8UF
T: 0171 278 4631
F: 0171 837 2184

BBE
see Sound Technology

BBM ELECTRONICS GROUP LTD
Distributing: Trantec.
20–30 Wates Way, Mitcham, Surrey CR4 4HR
T: 0181 640 1225
F: 0181 640 4096
E: enquiries@trantec.co.uk
W: www.trantec.co.uk

BEHRINGER UK LTD
St Vincent House, 59 Woodbridge Road,
Guildford, Surrey GU1 4RF
T: 01483 458877
F: 01483 458822
E: behringuk@aol.com
W: www.behringer.de

BELLARI
see Turnkey

BENSON AUDIO LABS
see MI Rep

BERKLEY INTEGRATED AUDIO SOFTWARE
see SCV London

BEYERDYNAMIC (GB) LTD
Also distributing: Omniphonics, Soundtracs.
17 Albert Drive, Burgess Hill,
West Sussex RH15 9TN
T: 01444 258258
F: 01444 258444
E: sales@beyerdynamic.co.uk

BIAS
see SCV London
W: www.bias-inc.com

BLUE CHIP MUSIC TECHNOLOGY
see Wersi UK

BOSS
see Roland

BPM STUDIO TECHNIK
see A+F McKay Audio

BRAUNER, DIRK
see Dirk Brauner

BRÜEL & KJÆR
see Sound Network

BSS AUDIO
Linkside House, Summit Road,
Potters Bar, Hertfordshire EN6 3JB
T: 01707 660667
F: 01707 660755
E: info@bss.co.uk
W: www.bss.co.uk

CAD
see Music Connections

CAKEWALK
see Et Cetera
W: www.cakewalk.com

CALISTAN SOLUTIONS
PO Box 17550, London NW2 5ZA
T: 0171 691 7823
F: 0171 691 7823
W: www.calistan.demon.co.uk

CANAM
see Labyrinth

CANFORD AUDIO PLC
Crowther Road, Washington,
Tyne & Wear NE38 0BW
T: 0191 417 0057
F: 0191 416 0392
E: sales@canford.co.uk
W: www.canford.co.uk

CARLSBRO ELECTRONICS LTD
Cross Drive, Kirkby-in-Ashfield,
Nottinghamshire NG17 7LD
T: 01623 753902
F: 01623 755436

CASIO ELECTRONICS
T: 0181 450 9131

C-AUDIO
see Arbiter Group

CDP
see Dawson's Music

C-DUCER
see AMG Electronics

CERWIN-VEGA EUROPE
Unit 9, Centre Park Holdings, The Airfield,
Tockwith, York YO5 8QF
T: 01423 359054
F: 01423 359058

CHIAYO
see CIE Audio

CIE AUDIO LTD
Distributing: Chiayo, Wharfdale.
Widdowson Close, Blenheim Industrial Estate,
Bulwell, Nottingham NG6 8WB
T: 0115 977 0075
F: 0115 977 0081
E: audio@cie-ltd.co.uk

CIMPLE SOLUTIONS PROFESSIONAL LTD
Distributing: EES, Seer Systems, Viscount.
Unit 2–17 Wembley Commercial Centre,
80 East Lane, North Wembley,
Middlesex HA9 7UR
T: 0181 904 4141
F: 0181 904 1200
E: service@cimplesolutions.demon.co.uk
W: www.cimplesolutions.demon.co.uk

CITRONIC LTD
Halifax Road, Bowerhill, Melksham,
Wiltshire SN12 6XN
T: 01225 705600
F: 01225 709639
E: citronic@compuserve.com

CLAVIA
see Music Connections
W: www.clavia.se

CLM DYNAMICS
T: 01382 534868

CODA
see Et Cetera

CONTROL SYNTHESIS
T: 01270 683779

COPSON DATA
see Audio Awareness

CREAMWARE
see Et Cetera

CREATIVE LABS (UK) LTD
Unit 2, The Pavilions,
Ruscombe Business Park, Ruscombe,
Berkshire RG10 9NN
T: 01734 344322
F: 01734 320300
W: www.creative-labs.co.uk/clenet/

CREST AUDIO
see The Sound Department

CROWN
see Fuzion

DACS LTD
FREEPOST NT1808, Gateshead NE10 0BR
T: 0191 438 5585
F: 0191 438 6967
W: www.DACS-Audio.co.uk

DAL
see Et Cetera

DANISH PRO AUDIO
see Sound Network

DAS SOUND PRODUCTS
see Sennheiser UK

DATA BECKER
Unit 9, Bentley Industrial Estate, Bentley,
Farnham, Surrey GU10 5NJ
T: 01420 22707
F: 01420 22807
E: databecker@dial.pipex.com
W: www.data-becker.co.uk

DATASONICS
see Et Cetera

DAWSON'S MUSIC
Distributing: CDP.
65 Sankey Street, Warrington WA1 1SU
T: 01925 632591

DBX
see Arbiter Group

DDD
Distributing: MusicNet, Sonorus.
10 Bicknoller Close, Belmont, Surrey SM2 4NQ
T: 0181 642 6306
F: 0181 642 6306

DEMETER
see The UK Office

DENON
see Hayden Laboratories

DIGIDESIGN
Also distributing: Synchro Arts.
Westide Complex, Pinewood Studios,
Pinewood Road, Iver Heath,
Buckinghamshire SL0 0NH
T: 01753 653322
F: 01753 654999
W: www.digidesign.com

DIGILAB
see A+F McKay Audio

DIGITAL AUDIO LABS
see Et Cetera

DIGITAL AWARENESS
see Audio Awareness

DIGITECH
see Arbiter Group

DIRK BRAUNER
Röhrengerätemanufaktur, van de Wallstra 1,
D-46499 Brunen, Germany
T: +49 2856 9270
F: +49 2856 9271
E: dbrauner@t-online.de
W: www.dirk-brauner.com

DJ2000 DISTRIBUTION LTD
T: 0956 702000
F: 0956 702001

DOD
see Arbiter Group

DOEPFER MUSIKELEKTRONIK
see EMIS
W: www.doepfer.com

DPA
see Sound Network

DRAWMER ELECTRONICS LTD
Charlotte Street Business Centre,
Charlotte Street, Wakefield,
West Yorkshire WF1 1UH
T: 01924 378669
F: 01924 290460
E: sales@drawmer.co.uk
W: www.drawmer.co.uk

DR T'S
see Off Planet Media

EARTHWORKS
see Unity Audio

ECHO
see Key Audio Systems

EES
see Cimple Solutions

EL CHOCOLATES
T: 0171 735 0798
F: 0171 735 0798

ELECTRIC MUSIC
Distributing: WHI Systems.
tbc

ELECTRONIC COW
T: 0411 544133

ELECTRO-VOICE
see Shuttlesound

EMAGIC
see Sound Technology
W: www.emagic.de

EMIS
Distributing: Doepfer Musikelektronik.
The Old School House, Cossham Street,
Mangotsfield, Bristol BS17 3EN
T: 0117 956 1855
F: 0117 956 1855
E: EMIS@dial.pipex.com
W: dspace.dial.pipex.com/emis

E-MU
see E-mu<>Ensoniq
W: www.emu.com

E-MU<>ENSONIQ
T: 01753 630808

ENSONIQ
see E-mu<>Ensoniq
W: www.ensoniq.com

EPOS
see Mordaunt-Short

ET CETERA
Distributing: AdB/MultiWAV, AVM, Cakewalk,
Coda, Creamware, Datasonics, Digital Audio
Labs/DAL, Frontier Design, Gadget Labs,
Guillemot, Innovative Quality, KCCM,
Musicware, Syntrillium, Tracer, Turtle Beach,
WaveCenter.
Valley House, 2 Bradwood Court,
St Crispin Way, Haslingden,
Lancashire BB4 4PW
T: 01706 228039
F: 01706 222869
W: www.etcetera.co.uk

EVENT
see Key Audio Systems

EVENTIDE
see HHB Communications

EVOLUTION ELECTRONICS LTD
8 Church Square, Leighton Buzzard,
Bedfordshire LU7 7AE
T: 01525 372621
F: 01525 383228
W: www.evolution-uk.com

EXCLUSIVE DISTRIBUTION LTD
Distributing: Studio Electronics, Zoom.
Unit 10, Furmston Court, Icknield Way,
Letchworth, Hertfordshire SG6 1UJ
T: 01462 481148
F: 01462 480049

FAIRMAN UK
T: 01663 764900
F: 01663 762328

FAR
see Axis Audio

FAT
see Turnkey

FATAR
see Arbiter Group

FCN MUSIC
Morley Road, Tonbridge, Kent TN9 1RA
T: 01732 366421

FLOPPYSHOP
PO Box 273, Aberdeen AB15 8GL
T: 01244 312756
F: 01244 312756

FOCUSRITE AUDIO ENGINEERING LTD
19 Lincoln Road, Cressex Business Park,
High Wycombe, Buckinghamshire HP12 3FX
T: 01494 462246
F: 01494 459920
E: sales@focusrite.com
W: www.focusrite.com

FOSTEX
see SCV London

FRONTIER DESIGN
see Et Cetera

FUSION
Distributing: ARX.
tbc

FUZION PLC
Distributing: Crown, Sabine, Symetrix.
2 Lyon Road, Walton-on-Thames,
Surrey KT12 3PU
T: 01932 882222
F: 01923 882244
E: 100517.254@compuserve.com

GADGET LABS
see Et Cetera

GENERAL MUSIC
see GEM

GEM
T: 01827 312230

GEMINI
Unit C4, Hazleton Industrial Estate,
Lakesmere Road, Horndean,
Waterlooville, Hampshire PO8 9JU
T: 01705 591771
F: 01705 593533

GENELEC
see Project Audio
W: www.genelec.com

GENEX
see HHB Communications

GEORGE MASSENBURG LABS
see HHB Communications

THE GLOBAL DISTRIBUTION GROUP
Distributing: Glyph Technologies, JoMoX,
Mutronics, Syntecno.
PO Box 39, Ashdon,
Saffron Walden, Essex CB10 2FT
T: 01799 584925
F: 01799 584094
E: sales@globaldistribution.com
W: www.globaldistribution.com

GLYPH TECHNOLOGIES
W: www.glyphtech.com
see The Global Distribution Group

GML
see HHB Communications

GRAVIS
see Koch Media

GREEN WORLD
Distributing: Musitek.
T: 01622 663551

GRM TOOLS
see Unity Audio

GROOVE TUBES
see Axis Audio

GUILLEMOT
see Et Cetera

HAMMOND UK
19 Presley Way, Crownhill,
Milton Keynes MK8 0ES
T: 01908 263990
F: 01908 265955
E: hammonds@computalynx.co.uk

HARBETH ACOUSTICS LTD
Distributing: Xpression!
Unit 1, Bridge Road, Hayward's Heath,
West Sussex RH16 1UA
T: 01444 440955
F: 01444 440688
W: www.harbeth.co.uk

HAYDEN LABORATORIES LTD
Distributing: Denon.
Chiltern Hill, Chalfont St Peter,
Buckinghamshire SL9 9UG
T: 01753 888447
F: 01753 880109

HEAVENLY MUSIC PRODUCTIONS
PO Box 3175, Clacton, Essex CO16 8GX
T: 01255 821039
F: 01255 821039
E: heavenly@ortiz.demon.co.uk
W: www.ortiz.demon.co.uk

HHB COMMUNICATIONS LTD
Distributing: Eventide, George Massenburg
Labs/GML, Klark Technik, Panasonic, Røde,
Summit, Technics.
73–75 Scrubs Lane, London NW10 6QU
T: 0181 962 5000
F: 0181 962 5050
E: sales@hhb.co.uk
W: www.hhb.co.uk

HISOFT
The Old School, Greenfield, Bedford,
Bedfordshire MK45 5DE
T: 01525 718181
F: 01525 713716

HK AUDIO
see John Hornby Skewes

HOBBYTE
10 Market Place, St Albans,
Hertfordshire AL3 5DG
T: 01727 856005

HW INTERNATIONAL
Distributing: Phonic, QSC Audio, Shure.
167–171 Willoughby Lane, London N17 0SB
T: 0181 808 2222
F: 0181 808 5599
E: hwinternational@dial.pipex.com

IBANEZ
see FCN Music

INNOVATIVE QUALITY
see Et Cetera

INTELLIGENT DEVICES
see Unity Audio
W: www.intelligentdevices.com

INTRINSIC TECHNOLOGY
PO Box 907, London SE27 9NZ
T: 0181 761 0178
F: 0181 761 0178

INVISION INTERACTIVE
T: 001 650 812 7380
W: www.cybersound.com

JAMO UK LTD
5 Faraday Close, Drayton Fields,
Daventry, Northampton NN11 5RD
T: 01327 301300
F: 01327 300511
W: www.jamo.co.uk

JBL PROFESSIONAL
see Arbiter Group
W: www.jblpro.com

JHS
see John Hornby Skewes

JL COOPER
see Sound Technology

JOEMEEK
see Sound Valley Distribution
W: www.joemeek.co.uk

JOHN HORNBY SKEWES & CO LTD
Also distributing: HK Audio, JHS, Target.
Salem House, Parkinson Approach,
Garforth, Leeds LS25 2HR
T: 0113 286 5381
F: 0113 286 8515

JOMOX
see The Global Distribution Group

KARNATAKA GROUP
T: 0171 721 7021
W: www.audioarchitect.com

KAWAI
see Arbiter Group

KCCM
see Et Cetera

KENTON ELECTRONICS
12 Tolworth Rise, South Surbiton,
Surrey KT5 9NN
T: 0181 337 0333
F: 0181 330 1060
E: sales@kenton.co.uk
W: www.kenton.co.uk

KEY AUDIO SYSTEMS LTD
Distributing: Clavia, Echo, Event, Mackie.
Unit D, 37 Robjohns Road,
Chelmsford, Essex CM1 3AG
T: 01245 344001
F: 01245 344002
E: info@keyaudio.co.uk
W: www.keyaudio.co.uk/keyaudio

KEYFAX
PO Box 4408, Henley-on-Thames,
Oxfordshire RG9 1FS
T: 01491 577147
W: www.keyfax.com

KLARK TECHNIK
see HHB Communications

KOCH MEDIA
Distributing: Gravis.
T: 01420 541680

KORG (UK) LTD
9 Newmarket Court, Kingston,
Milton Keynes MK10 0AU
T: 01908 857100
T: 01908 857150 (brochure information line)
F: 01908 857199
E: info@korg.co.uk
W: www.korg.com

KRK
see The UK Office
W: www.krksys.com

KURZWEIL
see Washburn (UK)

LA AUDIO
see SCV London

LAB.GRUPPEN AB
see Autograph Sales

LABYRINTH
Distributing: Canam.
Labyrinth House, 11 Albert Place,
Lower Darwen, Darwen, Lancashire BB3 0QE
T: 01254 678915

LANGEVIN
see Raper & Wayman

LAST UNICORN
T: 01256 701470

LEXICON
see Stirling Audio

LONGWAVE INSTRUMENTS
23 Ashley Lane, Hordle, Lymington,
Hampshire SO41 0GB
T: 01425 610849
E: 101364.522@compuserve.com

LUCID TECHNOLOGY
see SCV London

MACKIE DESIGNS INC
see Key Audio Systems
W: www.mackie.com

MARANTZ PROFESSIONAL
Kingsbridge House, Padbury Oaks,
575–583 Bath Road, Longford,
Middlesex UB7 0EH
T: 01753 686080
F: 01753 686
W: www.marantz.com

MARION SYSTEMS
see MCMXCIX

THE MIX CONTACTS

THE COMPLETE GUIDE TO WHO MANUFAC

MAXI SOUND
see Ubi Soft

MCMXCIX
Distributing: MusicQuest.
1 Amalgamated Drive, West Cross Centre,
Great West Road, Brentford, Middlesex
T: 0171 723 7221
F: 0181 400 1240
E: sales@saleswarehouse.co.uk

MEDIATRIX
see RKMS

MICRODEAL
see HISoft

MICROTECH GEFELL
see Stirling Audio
W: www.microtechgefell.com

MIDIMAN UK
Hubberts Bridge House, Hubberts Bridge,
Boston, Lincolnshire PE20 3QU
T: 01205 290680
F: 01205 290671
E: midimanuk@compuserve.com
W: www.midifarm.com/midiman

MIDI SOLUTIONS
see Arbiter Group

MI REP LTD
Distributing: Benson Audio Labs.
PO Box 400, Exeter, Devon EX5 2YP
T: 01404 822011
F: 01404 822699
E: MIRep@compuserve.com

MORDAUNT-SHORT
Distributing: EPOS.
tbc

MOTU
see MusicTrack
W: www.motu.com

MTR LTD
Ford House, 58 Cross Road,
Bushey, Hertfordshire WD1 4DQ
T: 01923 234050
F: 01923 255746
E: mtrltd@aol.com

MULTIWAV
see Et Cetera

MUSICATOR A/S
see Arbiter Group

MUSIC CONNECTIONS
Distributing: ART, CAD, Clavia, Presonus,
Spectral Audio, Westlake Audio.
202 New Kings Road, London SW6 4NS
T: 0171 731 5993
F: 0171 731 2600
W: www.musicconnections.co.uk

MUSIC LAB
Distributing: Pioneer.
T: 0171 388 5392

MUSICNET
see DDD

MUSIC PC
see Arbiter Group

MUSICQUEST
see MCMXCIX

MUSICTRACK
Distributing: MotU.
19a High Street, Shefford,
Bedfordshire SG17 5DD
T: 01462 812010
F: 01462 814010
E: musictrack@compuserve.com

MUSICWARE
see Et Cetera

MUSITEK
see Green World

MUTRONICS
see The Global Distribution Group

NAGRA KUDELSKI
T: 01727 810002

NATIVE INSTRUMENTS
see Turnkey

NATURAL AUDIO LTD
Dixies Barns, High Street,
Ashwell, Hertfordshire SG7 5NT
T: 01462 743300
F: 01462 743344
E: naturalaudio@compuserve.com

NEAT ACOUSTICS LTD
Unit 1a, Stainton Grove Industrial Estate,
Durham DL12 9UJ
T: 01833 631021
F: 01833 630022
W: www.neat.co.uk

NEATO LLC UK
College House, 17 King Edwards Road,
Ruislip, Middlesex HA4 7AE
T: 0990 561571
F: 01895 639955
W: www.neato.com

NEVATON
see A+F McKay Audio

NEW DIMENSIONS
T: 01291 690933

NEWTRONIC LTD
62B Manor Avenue, London SE4 1TE
T: 0181 691 1087
F: 0181 691 2284
E: sales@newtronic.com
W: www.newtronic.com

NEUMANN
see Sennheiser

NIGHTPRO
see Sound Valley Distribution

NOBELS
see Barnes & Mullins

NOVATION ELECTRONIC MUSIC SYSTEMS LTD
Westacott Business Centre,
Maidenhead Office Park, Westacott Way,
Maidenhead, Berkshire SL6 3RT
T: 01628 828888
F: 01628 825599
E: sales.novation@nova-uk.com
W: www.nova-uk.com

OBERHEIM
see Cimple Solutions

OFF PLANET MEDIA
Distributing: Dr T's.
T: 0115 953 1131

OKTAVA
see A+F McKay Audio

OMNIPHONICS
see Beyerdynamic

OPCODE SYSTEMS
see SCV London
W: www.opcode.com

ORAM PROFESSIONAL AUDIO
T: 01474 815300
F: 01474 815400
E: Salessac@oram.co.uk
W: www.oram.co.uk

ORCHID EUROPE
T: 01256 479898

ORGON SYSTEMS
T: 0191 290 2592

OTARI
see Stirling Audio

PANASONIC
see HHB Communications

PASSPORT DESIGNS
see Arbiter Group

PC SERVICES
T: 0181 658 7251

PEAVEY ELECTRONICS LTD
Great Folds Road, Oakley Hay, Corby,
Northamptonshire NN18 9ET
T: 01536 461234
F: 01536 747222
E: peavey_eu@aol.com
W: www.peavey.com

PG MUSIC
see Arbiter Group
W: www.pgmusic.com

PHILIP REES MODERN MUSIC TECHNOLOGY
Unit 2, Clarendon Court, Park Street,
Charlbury, Oxford OX7 3PT
T: 01608 811215
F: 01608 811227
E: info@philrees.co.uk
W: www.philrees.co.uk

PHILIPS
see SRTL

PHONIC
see HW International

PIONEER
see Music Lab

PLASMON
T: 01763 262963

POWER TECHNOLOGY
see RKMS
W: www.dspfx.com

PPM
see Select Systems

PRESONUS
see Music Connections

PRISM MEDIA PRODUCTS LTD
Distributing: PrismSound.
William James House, Cowley Road,
Cambridge, Cambridgeshire CB4 4WX
T: 01223 424988
F: 01223 425023
E: sales@prismsound.com
W: www.prismsound.com

PROJECT AUDIO LTD
Distributing: Genelec.
5 Castle Road, London NW1 8PR
T: 0171 428 9700
F: 0171 428 9699
E: project.audio@zetnet.co.uk

PROSONIC
see Arbiter Group

PROTAPE
15 Percy Street,
London W1P 0EE
T: 0171 323 0277
F: 0171 580 6852

Q-LOGIC
T: 01307 850393
E: midimetro@qgroup.demon.co.uk
W: www.qgroup.demon.co.uk

QSC AUDIO INC
see HW International
W: www.qscaudio.com

QUASIMIDI MUSIKELEKTRONIK GMBH
Bahnhofstrasse 44,
D-35282 Rauschenberg, Germany
T: 0049 6425 93000
F: 0049 6425 930093
E: info@quasimidi.com
W: www.quasimidi.com

RAPER & WAYMAN
Distributing: Apogee, Langevin, Manley, tc
electronic.
Unit 3, Crusader Estate, 167 Hermitage Road,
Manor House, London N4 1LZ
T: 0181 800 8288
F: 0181 809 1515
E: r+w.proaudio@dial.pipex.com

RANE
see Shuttlesound

RED SOUND SYSTEMS LTD
Chancery Court Business Centre,
Lincolns Inn, Lincoln Road,
High Wycombe, Buckinghamshire HP12 3RE
T: 01494 429321
F: 01494 446321
E: 106345.1123@compuserve.com.uk
W: www.redsound.com

REVEAL COMPUTER PRODUCTS
T: 0181 845 7400

RICHARD ALLEN
T: 01274 872442

RIVER PRO-AUDIO
Distributing: Traxdata.
Unit 3, Grange Yard, London SE1 3AG
T: 0171 231 4805
F: 0171 237 1234
E: Riverproaudio@btinternet.com
W: www.btinternet.com/riverproaudio

RKMS
Distributing: MediaTrix, Power Technology.
57 Chesterfield Avenue, Gedling,
Nottingham NG4 4GE
T: 0115 961 1398
F: 0115 953 3802
W: www.rkms.com

RODE
see HHB Communications

RODGERS
see Roland

ROLAND (UK) LTD
Also distributing: Boss.
Atlantic Close, Swansea Enterprise Park,
Swansea, West Glamorgan SA7 9FJ
T: 01792 515020
F: 01792 310248
E: mktg@roland.co.uk
W: www.roland.co.uk

RPTS SYSTEMS LTD
T: 01869 277884
W: www.rpts.com

SABINE
see Fuzion

SAMICK
see Audio Awareness

SAMPLEZONE
see Arbiter Group
W: www.samplezone.co.uk

SAMSON TECHNOLOGIES
see Sound Technology

SANKEN
see Stirling Audio

SCV LONDON
Distributing: Berkley Integrated Audio
Software/Bias, Fostex, LA Audio, Lucid
Technology, Opcode Systems, Sek'd, Sonic
Foundry, SyQuest, Waves.
6–24 Southgate Road, London N1 3JJ
T: 0171 923 1892
F: 0171 241 3644
E: aslade@scvlondon.co.uk
W: www.scvlondon.co.uk

SEER SYSTEMS
see Cimple Solutions Professional
W: www.seersystems.com

SEK'D
see SCV London

SENNHEISER UK LTD
Also distributing: DAS Sound Products,
Neumann.
3 Century Point, Halifax Road,
High Wycombe, Buckinghamshire HP12 3SL
T: 01494 551551
F: 01494 551550
E: info@sennheiser.co.uk
W: www.sennheiser.co.uk

SHERMAN
see El Chocolates

SHURE
see HW International

SHUTTLESOUND
Distributing: Electro-Voice.
4 The Willows Centre, Willow Lane,
Mitcham, Surrey CR4 4NX
T: 0181 646 7114
F: 0181 640 7583
E: shuttle.uk@aol.com

SILVER PRODUCTIONS
T: 01722 336221

SKB
see Arbiter Group
W: www.skbcases.com

SMART RESEARCH
see Sounds Incorporated

SMART SOUND DIRECT
Distributing: SoundTech.
Units 5&6, 38–40 Town End,
Caterham, Surrey CR3 5UG
T: 01883 346647
F: 01883 340073
E: smartsnd@aol.com

SOFTJEE
E: softjee@hol.fr
W: wwwperso.hol.fr/~softjee

SOFTWARE TECHNOLOGY
T: 0161 236 2515

SOLTON
see Audio Awareness

SONIC FOUNDRY
see SCV London
W: www.sfoundry.com

SONORUS
see DDD
W: www.sonorus.com

SONY BROADCAST & PROFESSIONAL EUROPE
Jays Close, Viables,
Basingstoke, Hampshire RG22 4SB
T: 01256 355011
F: 01256 474585
W: professional-audio.com

SOUNDCRAFT
Cranborne House, Cranborne Road,
Potters Bar, Hertfordshire EN6 3JN
T: 01707 665000
F: 01707 660742
E: info@soundcraft.com
W: www.soundcraft.com

THE SOUND DEPARTMENT
Distributing: Crest Audio.
19 Blacklands Way, Abingdon Business Park,
Abingdon, Oxfordshire OX14 1DY
T: 01235 555622
F: 01235 536654
E: soundsales@sound-dept.co.uk

SOUNDFIELD
Charlotte Business Centre, Charlotte Street,
Wakefield, West Yorkshire WF1 1UH
T: 01924 201089
F: 01924 201618

SOUND NETWORK
Distributing: B&K/Briel & Kjær, Danish Pro Audio/DPA.
T: 0171 890 7070

SOUNDQUEST
see Arbiter Group

SOUNDSCAPE DIGITAL TECHNOLOGY LTD
Crichton House, Mount Stuart Square,
Cardiff Bay, Cardiff CF1 6DR
T: 01222 450120
F: 01222 450130
E: sales@soundscape-digital.com
W: www.soundscape-digital.com

SOUNDS INCORPORATED
Distributing: Smart Research.
T: 01892 861099
F: 01892 863485
E: nick@soundsinc.co.uk
W: www.soundsinc.co.uk

SOUNDS OK
Distributing: GreytSounds Sound Development, Sound Source Unlimited, WaveBoy Industries.
10 Frimley Road Gardens, Frimley,
Camberley, Surrey GU16 5JX
T: 01276 22946
F: 01276 682313

SOUNDTECH
see Smart Sound Direct

SOUND TECHNOLOGY PLC
Distributing: Alesis, BBE, Emagic, JL Cooper, Samson.
Letchworth Point, Letchworth,
Hertfordshire SG6 1ND
T: 01462 480000
F: 01462 480800
E: info@soundtech.co.uk
W: www.soundtech.co.uk

SOUNDTRACS
see Beyerdynamic
W: www.soundtracs.co.uk

SOUND VALLEY DISTRIBUTION LTD
Distributing: Joemeek.
The Briars, North Road, Amersham,
Buckinghamshire HP6 5NA
T: 01494 434738
F: 01494 727896
E: joemeek@soundvalley.demon.co.uk

SPECTRAL AUDIO
see Music Connections

SPENDOR
see Tony Larking Professional Sales

SPIRIT BY SOUNDCRAFT
Cranborne House, Cranborne Industrial Estate,
Cranborne Road, Potters Bar,
Hertfordshire EN6 3JN
T: 01707 665000
F: 01707 665461
E: spirit@dial.pipex.com
W: www.spirit-by-soundcraft.co.uk

SPL ELECTRONINCS
see Stirling Audio
W: www.SPL-electronics.com

SRTL
Distributing: Philips.
Record House, Emsworth,
Hampshire PO10 7NS
T: 01243 379834
F: 01243 430639
e-mail info@srtl.co.uk
W: www.srtl.co.uk

STEINBERG
see Arbiter Group
W: www.steinberg.net

STIRLING AUDIO SYSTEMS
Distributing: Aphex Systems, Lexicon, Microtech Gefell, Otari, Sanken, SPL-electronics, Zobel.
Stirling House, Kimberley Road,
London NW6 7SF
T: 0171 624 6000
F: 0171 372 6370
E: sales@stirlingaudio.com
W: www.stirlingaudio.com

STUDER-REVOX UK
T: 01635 876969

STUDIO AUDIO & VIDEO LTD
Distributing: SADIE
The Old School, Stretham,
Ely, Cambridgeshire CB6 3LD
T: 01353 648888
F: 01353 648867
E: support@sadie.com
W: www.sadie.com

STUDIO ELECTRONICS
see Exclusive Distribution

STUDIOMASTER
Also distributing: UFEX.
Studiomaster House, Chaul End Lane,
Luton LU4 8EZ
T: 01582 570370
F: 01582 494343
W: www.studiomaster.com

STUDIOSPARES
61–63 Rochester Place, London NW1 9JU
T: 0171 482 1692
F: 0171 485 4168
E: 101745.1553@compuserve.com

SUMMIT
see HHB Communications

SUNRIZE
see Hobbyte

SYCO SYSTEMS
Distributing: Apogee.
Kimberley Road, London NW6 7SF
T: 0171 625 6070
F: 0171 372 7660
E: sales@syco.com

SYMETRIX
see Fuzion

SYNCHRO ARTS
see Digidesign

SYNTECNO
see Global Distribution Group

SYNTRILLIUM
see Et Cetera

SYQUEST
see SCV London

SYSTEM SOLUTIONS
17–19 Blackwater Street, London SE22 8RS
T: 0181 693 3355
F: 0181 693 6936
E: sales@system-solutions.co.uk

SYSTEMS WORKSHOP
Distributing: Tube-Tech.
The Old Smithy, Church Street, Oswestry,
Shropshire SY11 2SP
T: 01691 658550
F: 01691 658549
E: 100330.3222@compuserve.com

TAKE CONTROL
see Titan Designs

TANDY
T: 01922 434000

TANNOY
see TEAC UK
W: www.tannoy.com

TARGET MIXING CONSOLES
see John Hornby Skewes

TASCAM
see TEAC UK
W: www.tascam.com

TC ELECTRONIC
see Raper & Wayman
W: www.tcelectronic.com

TC WORKS
see Arbiter Group
W: www.tcworks.de

TEAC UK
Distributing: Tannoy, Tascam.
5 Marlin House, The Croxley Centre,
Watford, Hertfordshire WD1 8YA
T: 01923 819630
F: 01923 236290

TECHNICS
see HHB Communications

TERRATEC PROMEDIA
T: 01600 716911
F: 01600 716744
E: sales@terratec.co.uk
W: www.terratec.co.uk

TIME+SPACE
PO Box 4, Okehampton, Devon EX20 2YL
T: 01837 841100
F: 01837 840080
E: sales@timespace.com
W: www.timespace.com

TITAN DESIGNS
T: 0121 415 4155

TLA
see Tony Larking Professional Sales

TL AUDIO
see Tony Larking Professional Sales

TONY LARKING PROFESSIONAL SALES LTD
Distributing: Spendor, TLA, TL Audio.
Norton Mill House, Nortonbury Lane, Baldock,
Letchworth, Hertfordshire SG6 1AN
T: 01462 490600
F: 01462 490700
W: www.tlaudio.co.uk

TRACER
see Et Cetera

TRANTEC
see BBM Electronics

TRAXDATA UK LTD
IDC House, The Vale, Chalfont St Peter,
Buckinghamshire SL9 9RZ
T: 01753 89444
F: 01753 89544
E: uksales@traxdata.com
W: www.traxdata.com

TUBE-TECH
see Systems Workshop

TURNKEY
Distributing: Bellari, FAT, Native Instruments.
114 Charing Cross Road, London WC2H 0DT
T: 0171 379 5148
F: 0171 379 0093
E: sales@turnkey.demon.co.uk
W: www.turnkey.uk.com

TURTLE BEACH
see Et Cetera

UBI SOFT
Distributing: MAXI Sound.
T: 0181 944 9000
F: 0181 944 9400
W: www.ubisoft.com

UFEX
see Studiomaster

THE UK OFFICE LTD
Distributing: Aardvark, Audio Toys, Demeter, KRK, Z-Sys.
Berkamsted House, 121 High Street,
Berkhamsted, Hertfordshire HP4 2DJ
T: 01442 870103
F: 01442 870148
E: tuko@theukoffice.co.uk

UNITY AUDIO LTD
Distributing: Antares, Arboretum Systems, Earthworks, GRM Tools, Intelligent Devices, Wave Mechanics.
Upper Wheeler House, Colliers End,
Hertfordshire SG11 1ET
T: 01920 822890
F: 01920 822892
E: sales@unityaudio.co.uk
W: www.unityaudio.co.uk

THE UPGRADE SHOP
Unit F6, Venture House, Cross Street,
Macclesfield, Cheshire SK11 7PG
T: 01625 503448
F: 01625 503448
E: dave@tusdev.demon.co.uk

VESTAX EUROPE
18 St Chrisophers Road, Haslemere,
Surrey GU27 1DQ
T: 01428 653117
F: 01428 661021

VISCOUNT
see Cimple Solutions

VOYETRA
see Arbiter Group

WALDORF
see Arbiter Group

WASHBURN (UK)
Also distributing: Kurzweil.
Amor Way, Letchworth, Hertfordshire SG6 1UG
T: 01462 482466
F: 01462 482997

WAVECENTER
see Et Cetera

WAVE MECHANICS
see Unity Audio
W: www.wavemechanics.com

WAVES
see SCV London
W: www.waves.com

WERSI UK LTD
Also distributing: Blue Chip Music Technology.
PO Box 2011, Seaford, East Sussex BN25 2UY
T: 07000 783731
F: 07000 783732
E: sales@wersi.co.uk

WESTLAKE AUDIO
see Music Connections

WHARFDALE
see CIE Audio

WILL SYSTEMS
see Electric Music

WILMSLOW AUDIO
T: 01565 650605

XPRESSION!
see Harbeth Acoustics

YAMAHA-KEMBLE MUSIC (UK) LTD
Sherbourne Drive, Tilbrook,
Milton Keynes, Buckinghamshire MK7 8BL
T: 01908 366700
T: 01908 369269 (brochure information line)
F: 01908 368872
W: www.yamaha.co.uk

ZOBEL
see Stirling Audio

ZOOM
see Exclusive Distribution

Z-SYS
see The UK Office

SOUND GEAR

FORMATS: Every studio needs a keyboard of some kind. Synthesizers and keyboards include standard 'playback' sample-based keyboards as well as more traditional synthesizers. Workstations combine some kind of sound synthesis with a keyboard, sequencer and effects for the ultimate all-in-one solution. Sound modules cover everything without a keyboard, ranging from computer sound modules to sophisticated workstations and analogue synthesizers. Modules may be desk-top, 19-inch rackmount or non-standard. Electronic percussion includes drum machines and percussion modules, and those controllers specific to their use.

POLYPHONY: More is generally better, though the number of notes you can play may be limited in some way by the multitimbral mode and arrangement.

SYNTHESIZERS & KEYBOARDS

MANUFACTURER	MODEL	PRICE	POLYPHONY	DESCRIPTION	REVIEW
Alesis	QS6	£949	64	61 semi-weighted keys, 8Mb ROM, 912 presets, 228 user, 16-part multi, 2 outs	Apr 96
Alesis	*QS7*	*£1299*	*64*	*76 semi-weighted keys,* 16Mb ROM, 912 presets, 228 user, 16-part multi, 4 outs	*May 97*
Alesis	QS8	£1699	64	88 fully-weighted keys, 16Mb ROM, 912 presets, 228 user, 16-part multi, 4 outs	May 97
Casio	*GZ-500*	*£399*	*32*	*61 key GM keyboard with speakers, pitch bend wheel*	*Aug 96*
Clavia	Nord Lead 2	£1495	16	49 velocity-sensitive keys, 99 presets, 4-part multitimbral, 4 outs, arpeggiator	Sep 97
Clavia	*Nord Lead Classic*	*£999*	*4*	*Physical-modelling synth recreating analogue sounds*	*Jul 95*
Clavia	Nord Modular	£1495	32	25 keys, 4-part multitimbral, 4 outs, PC software	
GEM	*RealPiano*	*£999*	*64*	*88 weighted keys with 8 piano-based sounds, 25W amplification*	*Nov 96*
GEM	RealPiano Pro 2	£1399	64	88 weighted keys, virtual modelling, 48 presets, sequencer, 2 effects, EQ, 2 outs	
Kawai	*K11*	*£1049*	*32*	*128 GM sounds, other presets, drums, 2 MIDI Ins/Outs, Mac interface*	
Kawai	K5000S	£2000	32	61 keys, 4-part multi, 256 presets, 4 outputs, advanced-additive synthesis	Mar 98
Korg	*Prophecy*	*£999*	*1*	*High-end virtual monosynth*	*Oct 95*
Korg	X5	£799	32	Keyboard version of O5R/W mini-rack module	
Korg	*X5D*	*£899*	*64*	*8Mb wave memory, 61 keys, 47 effects through 2 processors*	
Korg	Z1	£1699	12	Multi-oscillator synthesizer	Nov 97
Kurzweil	*PC88*	*£1889*	*32*	*48 sounds with 88-key monitor keyboard and digital effects*	
Kurzweil	PC88MX	£2395	64	Double polyphony and 205 more programs than PC88	
Oberheim	*Eclipse*	*£1779*	*32*	*88-key weighted keyboard synth*	
Peavey	DPM2	£999	16	Good sounds – optional upgrade to include sequencer	
Quasimidi	*The Raven*	*£599*	*21*	*Techno-geared synth with good sounds and innovative controllers*	*Mar 96*
Quasimidi	Sirius	£749	tbc	Real-time instrument with 49 keys, with massive control	
Roland	*JP-8000*	*£1099*	*8*	*A Jupiter-8 for the digital age with a new, lower price*	*Mar 97*
Roland	JV-35	£999	24	Expandable synth, though keyboard lacks aftertouch	
Roland	*JV-35EX*	*£1149*	*56*	*As JV-35 with polyphony doubling VE-JV1EX5 card*	
Roland	JV-90	£1399	24	Expandable synth, 76-key	
Roland	*JV-90EX*	*£1555*	*56*	*As JV-35 with polyphony doubling VE-JV1 card*	
Roland	JX-305 GrooveSynth	£949	64	61 keys, 896 presets, 52 drum kits, 968 patterns, 8-part multi, 16-part RPS, 2 outs	
Roland	*RD-600*	*£1699*	*tbc*	*Piano-based sounds*	
Roland	XP-10	£399	28	318 presets, 61 keys, arpeggiator	
Spectral Audio	*ProTone*	*£399*	*1*	*Monosynth*	
Technics	SX-WSA1	£2499	64	Sophisticated physical modelling synth	Feb 96
Yamaha	*AN1x*	*£899*	*10*	*Analog Physical Modeling synthesizer with 10 real-time knobs, arpeggiator*	*Aug 97*
Yamaha	CBX-K1XG	£339	32	Combined mini-key controller keyboard and XG tone generation	
Yamaha	*CS1x*	*£599*	*32*	*Low-cost keyboard with high quality sounds*	*Aug 96*
Yamaha	EX5	£1899	128	76 keys with 4 types of synthesis, as well as sampling	
Yamaha	*EX7*	*£1399*	*128*	*61 keys with 4 types of synthesis, as well as sampling*	
Yamaha	VL-1	£3499	2	Virtual acoustic synth	
Yamaha	*VL-7*	*£2199*	*1*	*Monophonic 'budget' VL1 physical modelling synth*	

WORKSTATIONS

MANUFACTURER	MODEL	PRICE	POLYPHONY	DESCRIPTION	REVIEW
E-mu	E-Synth	£2999	64	Sampling workstation, combining on-board sounds, sampling and real-time control	
Ensoniq	*KS32*	*£1599*	*32*	*Machine with features of SQ2 and weighted keys*	
Ensoniq	KT76	£1999	64	76-key weighted key action with piano sounds	
Ensoniq	*KT88*	*£2149*	*64*	*88-key weighted-key action synth with piano sounds*	
Ensoniq	MR61	£1749	64	455 sounds, 16-track sequencer and disk drive	Jan 97
Ensoniq	*MR76*	*£1999*	*64*	*As above, but with 76-note keyboard*	*Jan 97*
Ensoniq	SQ-1 Plus	£899	32	180 sounds, 24-bit effects, only velocity-sensitive keyboard	
Ensoniq	*SQ-2*	*£1099*	*32*	*Adds aftertouch and 76 extra keys to SQ-1*	
Ensoniq	TS10	£1999	32	300 sounds, 254 waveforms, 24-track sequencer, 74 effects algorithms, disk drive	
Ensoniq	*TS12*	*£2199*	*32*	*76-note version of TS10*	
GEM	S2 Turbo	£1499	32	With fully usable sequencer section	
GEM	*S3 Turbo*	*£1799*	*32*	*Larger version of S3 with 76-note keyboard*	
GEM	SX2	£1626	32	61-key workstation with video features	
GEM	*SX3*	*£1826*	*32*	*76-key workstation with video features*	
Kawai	K5000W	£1750	32	Workstation incarnation of the K5000S	Feb 97
Korg	*i1*	*£3999*	*32*	*88 keys with unique variable keyboard function*	
Korg	i2	£2199	32	As i3, but with 76 keys	
Korg	*i3*	*£1899*	*32*	*PCM memory, multi effects, sequencer accompaniment*	
Korg	i4s	£1499	32	Scaled down version of i3 with built in speakers	
Korg	*i5s*	*£1099*	*32*	*Budget interactive workstation*	
Korg	i30	£1399	64	61 keys, 448 sounds, 40 drums kits, 128 accompanients, 47 effects	
Korg	*i30HD*	*£1899*	*64*	*As i30, but with 1Gb hard disk for storing data*	
Korg	iX300	£1344	32	Updated member of Korg's interactive workstation family	
Korg	*N264*	*£1499*	*64*	*An N364 with a 76-note keyboard*	*Dec 96*
Korg	N364	£1299	64	Korg takes the X workstation to the next generation	Dec 96
Korg	*Trinity*	*£1999*	*32*	*61-key workstation with 256 sounds and touch screen*	*Dec 95*

MANUFACTURER	MODEL	PRICE	POLYPHONY	DESCRIPTION	REVIEW
Korg	Trinity Plus	£2795	32	As Trinity, but with built-in Prophecy card	Feb 97
Korg	*Trinity Pro*	*£2395*	*32*	*76-note version of Trinity with Prophecy card*	*Feb 97*
Korg	Trinity ProX-88	£4795	32	88-note weighted version of Trinity with Prophecy card and hard-disk recording	Feb 97
Kurzweil	*K2vx*	*£2995*	*24*	*Updated K2000 with new set of sounds*	*Oct 96*
Kurzweil	K2000	£2250	24	Classic sound now updated with V3.0 sampling software	
Kurzweil	*K2000SE*	*£3499*	*24*	*Fully-expanded K2000 system with sampling sound blocks, flash RAM and a fan*	
Kurzweil	K2500	£2999	48	Latest version of K2000 series, double polyphony, improved sounds	
Kurzweil	*K2500/76*	*£3499*	*48*	*76-note version of K2500*	
Kurzweil	K2500/88	£3799	48	88 note version of K2500 with real time controllers	
Kurzweil	*K2500SE*	*£4499*	*48*	*Fully expanded K2500 with sampling, flash RAM, sound blocks and fan*	
Kurzweil	K2500X	£3999	48	76-note weighted key version of K2500	
Peavey	*DPM2Si*	*£1399*	*32*	*76 keys, 8Mb ROM samples, 80,000 note sequencer, 10 drumkits, 4 audio outs*	
Peavey	DPM3-SE plus	£1499	16	Version of DPM2 with sample memory	
Peavey	*DPM4*	*£1999*	*16*	*Expanded version of DPM3 with extended keyboard*	
Roland	G-800	£1999	64	76-key 'intelligent', auto-arranging	
Roland	*JV-50*	*£1285*	*24*	*Expandable, with built-in MIDI file sequencer though keyboard lacks aftertouch*	
Roland	JV-50EX	£1399	56	As JV-50 with polyphony doubling VE-JV1EX5 card	
Roland	*XP-50*	*£999*	*64*	*61-key version of the JV-1080 with sequencer*	*Apr 95*
Roland	XP-60	£1299	64	61 semi-weighted keys, 736 presets, 160 user, 16-part multi, 16-track sequencer	
Roland	*XP-80*	*£1499*	*64*	*Updated XP-50 with more outs and an arpeggiator*	*Jun 96*
Solton	MS50	£1799	28	61-key workstation, 256 GM sounds, 128 user memories, video out for karaoke	
Solton	*MS60*	*£1999*	*28*	*61-keys, 256 GM sounds, 128 user memories, video out for karaoke, live oriented*	
Yamaha	EX5	£1899	126	76 keys, 4 types of synthesis, sampler, sequencer, effects, arpeggiator	
Yamaha	*QS300*	*£1099*	*32*	*Advanced workstation with loads of playing features*	
Yamaha	W5	£1649	32	76-key sample playback workstation	
Yamaha	*W7*	*£1399*	*32*	*61-key sample playback workstation*	*Mar 95*

MODULES

MANUFACTURER	MODEL	PRICE	POLYPHONY	DESCRIPTION	REVIEW
Akai	EWI3020m	£599	1	Mono wind sound module	Feb 95
Akai	*EWI3030m*	*£750*	*1*	*Waveform-based wind sound module*	*Feb 95*
Akai	SG01k	£299	32	Budget GM sound module	Apr 96
Akai	*SG01p*	*£299*	*32*	*Budget piano module*	*Mar 96*
Akai	SG01v	£299	32	Budget vintage synth module	Jun 96
Alesis	*NanoBass*	*£249*	*64*	*1U, 4Mb ROM, 256 presets, 1-part multi, 2 outs*	*Oct 97*
Alesis	NanoPiano	£339	64	1U, 8Mb ROM, 256 presets, 1-part multi, 2 outs	
Alesis	*NanoSynth*	*£tbc*	*64*	*1U, 8Mb ROM, 512 presets, 128 user, 16-part multi, 2 ins, 2 outs, serial port*	
Alesis	QSR	£749	64	1U, 16Mb ROM, 912 presets, 228 user, 16-part multi, 4 outs	Jul 97
Alesis	*S4 Plus*	*£899*	*64*	*Rackmount piano module*	
Analogue Systems	RS Integrator	from £1000	n/a	Modular analogue synth	Aug 98
Blue Chip Music Technology	*OX 7*	*£999*	*tbc*	*Hammond B3 soundalike organ module with effects and 32 memories*	
Casio	GZ-50M	£199	32	Low-cost GM module with effects	Nov 95
Clavia	*Nord Modular*	*£1295*	*32*	*Rack version of the Nord Modular*	
Clavia	Nord Rack	£1295	4	Rack version of the Nord Lead VS analogue synth	
Control Synthesis	*Deep Bass 9*	*£449*	*1*	*Analogue bass module*	*Nov 94*
Doepfer	A-100	from £699	n/a	45 module expandable analogue modular patch synth	Feb 97
Doepfer	*MS-404*	*£299*	*1*	*'Real' rackmount synth, TB-303 analogue clone*	
E-mu	Audity 2000	£1299	32	1U, 16Mb ROM, 896 presets, 16-part multitimbral, arpeggiator, effects	
E-mu	*Carnaval*	*£899*	*32*	*1U, Latino sound module*	*Aug 97*
E-mu	Classic Keys	£648	32	1U, 8Mb ROM, 512 presets, 16-part multi, effects, 6 outputs	Feb 95
E-mu	*Morpheus*	*£1199*	*32*	*1U, 8Mb ROM, 512 presets, 16-part multi, 32 14-pole filters, effects, 6 outputs*	
E-mu	Orbit	£869	32	1U, dance-based sound module	Jul 96

IN FOCUS: QuasiMIDI Sirius

Price: £949

Developed from their popular Rave-O-Lution 309, the Sirius adds a keyboard and vocoder and a set of sounds that are unashamedly aimed at the dance producer/musician. As our sister magazine *Future Music* stated: "there are no trumpets, kotos, ocarinas or pipe organs and best of all, no GM set!" There's not even any pianos, so hard is the line QuasiMIDI have taken. But what of the most visible feature of the Sirius, the vocoder? Well, it seems well-featured with 16 presets and two filters for each of its nine bands, but it apparently shares a flaw with some other vocoders in being slightly unintelligible.

Brief Spec

- 28-voice polyphony
- 7-part multitimbral
- 9-band vocoder with high and low-pass filters
- Two effects processors with reverb, delay, chorus and flanger
- 192 drum kits

Sirius: the hard-line synth for dance producers

MANUFACTURER	MODEL	PRICE	POLYPHONY	DESCRIPTION	REVIEW
E-mu	Planet Phatt	£899	32	1U, swingbeat and funk sounds in Orbit-like rack unit	Aug 97
E-mu	*PROformance Plus*	*£359*	*32*	*1U, 4Mb ROM, 128 presets, 16-part multi, 6 outputs*	
E-mu	Proteus/2	£810	32	1U, 8Mb ROM, 192 presets, 16-part multi, 6 outputs	
E-mu	*Proteus/2 XR*	*£975*	*32*	*1U, 8Mb ROM, 384 presets, 16-part multi, 6 outputs*	
E-mu	Proteus FX	£610	32	1U, 8Mb ROM, 512 presets, 16-part multi, effects, 6 outputs	Aug 94
E-mu	*UltraProteus*	*£1499*	*32*	*1U, 16Mb ROM, 512 presets, 16-part multi, 32 14-pole filters, effects, 6 outputs*	*Nov 94*
E-mu	Vintage Keys Plus	£1055	32	1U, 16Mb ROM, 512 presets, 16-part multi, effects, 6 outputs	
Ensoniq	*MR-Rack*	*£1299*	*64*	*Flexible synth box*	*Jul 96*
Exclusively Analogue	The Aviator	£950	3	Semi-modular analogue synth	Apr 96
FAT	*Freebass 383*	*£199*	*1*	*TB-303 emulation*	*Dec 97*
GEM	RealPiano Expander	£449	64	Module version of RealPiano Pro 2	Aug 97
GEM	*S2R*	*£1399*	*32*	*Rackmount version of S2 synth plus Turbo kit*	
Hammond	GM-1000	£549	32	True Hammond organ samples	
Hammond	*XM1*	*£799*	*64*	*Digitally-programmable Hammond sounds in a box*	*Oct 96*
Kawai	GMega	£689	32	GM/SP banks, 14 drum kits, Mac interface	
Kawai	*GMega XC3*	*£384*	*28*	*Cut-down GMega with no panel controls*	
Kawai	K5000R	£999	32	Rackmounted additive synthesis module	
Korg	*i5m*	*£899*	*32*	*Desktop workstation with harmonies and accompaniments*	
Korg	NS5R	£599	64	Desktop module that goes way beyond the usual GM limitations	Apr 97
Korg	*05R/W*	*£499*	*32*	*128 presets, effects, Mac/PC/MIDI interface*	
Korg	SG-Rack	£699	64	Piano module with 64 presets, effects, split/layer options	May 98
Korg	*TR-Rack*	*£999*	*64*	*32Mb sound ROM, 1024 presets, 16-part multitimbral, 2 effects processors*	*Apr 98*
Korg	X5DR	£675	64	Rackmount version of X5D keyboard	Jul 95
Kurzweil	*K2000R*	*£2250*	*24*	*Hi-spec module with sampling, SCSI, 10 outputs*	
Kurzweil	K2000RSE	£3499	24	Fully expanded K2000R	
Kurzweil	*K2500R*	*£2999*	*48*	*New version of K2000R with doubled polyphony*	*Sep 95*
Kurzweil	K2500RSE	£4499	48	Fully expanded K2500R	
Kurzweil	*MicroPiano*	*£599*	*tbc*	*Piano-sound module*	
Longwave Instruments	Pocket Theremin	£99	1	Pitch-only version of the classic synth	
Marion Systems	*MSR2*	*£1299*	*8*	*Expandable analogue synth module*	
Marion Systems	ProSynth	£699	8	Multitimbral analogue rackmount	Jun 95
Midiman	*Gman*	*£199*	*24*	*GM/GS compatible module*	
Novation	Super Bass Station	£449	1	Much improved on the original keyboard, complete with arpeggiator	Aug 97
Novation	*Supernova*	*£1299*	*16*	*512 presets, 3 types of synthesis, 8-part multitimbral, 48 effects, 8 EQs, 8 outputs*	*Oct 98*
Novation	Supernova	£1699	32	As above, but with 32-note polyphony and 1024 presets	Oct 98
Oberheim	*Matrix 1000*	*£379*	*6*	*Loads of fat analogue sounds, but no multi mode*	
Oberheim	OBMX	£1500	2	2-voice rackmount, extra 2-voice cards @ £500 each	
Orgon	*Enigiser*	*£469*	*1*	*No MIDI*	*Dec 96*
Peavey	Paradox Valve	£tbc	1	Triple-oscillator analogue monosynth with valves on its output	
Peavey	*Spectrum Bass II*	*£350*	*8*	*Rackmount bass synth module*	*Spr 97*
Peavey	Spectrum Organ	£359	32	Organ rack module with rotary speaker sim	Aug 95
Peavey	*Spectrum Synth*	*£359*	*12*	*Rackmount sample playback synth module*	*Oct 95*
Quasimidi	Quasar	£1099	21	Flexible-structure synth module	Oct 94
Quasimidi	*Rave-O-Lution 309*	*£549*	*16*	*Analogue-emulator and arranger, with expansion options*	*Aug 97*
Quasimidi	Technox	£749	21	Techno/dance-oriented synth module	Apr 95
Roland	*GR-30*	*£649*	*28*	*Budget guitar synth, needs GK-2A pick-up*	*Jul 94*
Roland	JV-1080	£829	64	Expandable Super JV synth module	Dec 94
Roland	*JV-2080*	*£1149*	*64*	*A JV-1080 with more effects, more sounds, graphics and 8 expansion slots*	*Apr 97*
Roland	M-BD1	£399	28	Sampled drums and live bass sound module	May 97
Roland	*M-DC1*	*£499*	*28*	*Preset dance module with T+S rhythm loops*	*Sep 95*
Roland	M-GS64	£599	64	Preset-based GM synth module	Nov 95
Roland	*M-OC1*	*£499*	*28*	*Preset orchestral module*	*Sep 95*
Roland	M-SE1	£499	28	Preset string module	
Roland	*MT 80S*	*£499*	*24*	*MIDI file player*	
Roland	MT 120S	£899	24	Sequencer with built-in sounds and speakers	
Roland	*M-VS1*	*£499*	*28*	*Preset vintage synth module*	*Sep 95*
Roland	SC-7	£290	24	DTM-geared sound module for Macs and PCs	
Roland	*SC-55ST*	*£365*	*28*	*Sound Canvas with 354 sounds, 10 drumkits*	
Roland	SC-88	£869	24	Super Sound Canvas with better editing	Jan 95
Roland	*SC-88Pro*	*£699*	*64*	*Super Sound Canvas with effects and over 1000 sounds*	*Jun 97*
Roland	SC-88VL	£649	64	Super Sound Canvas with effects and 654 sounds	
Roland	*SC-880Pro*	*£699*	*64*	*1U, 1117 presets, 256 user, 58 drum kits, 32-part multi, effects, 2 MIDI Ins, 4 outs*	
Roland	SD-35	£785	24	Combined file-player and sound module	
Roland	*VG-8*	*£1999*	*6*	*Virtual modelling guitar system*	*Oct 95*
Solton	MS40	£1499	28	256 GM sounds, user memories and video output for karaoke	
Spectral Audio	*ProTone*	*£399*	*1*	*Analogue rack with reduced MIDI spec*	*Sep 96*
Studio Electronics	ATC-1	£799	1	Rackmount analogue monosynth	May 97
Studio Electronics	*SE-1*	*£1522*	*1*	*Rackmount programmable Minimoog clone*	
Syntecno	TeeBee	£529	1	Bass module, ring mod, ext filter input, 4 MIDI-to-CV gate converters	Mar 97
Technics	*SX-WSA1R*	*£2199*	*64*	*Acoustic modelling rack version of WSA1*	
Waldorf	Microwave II	£999	8	Highly programmable rack synth	
Waldorf	*Pulse*	*£599*	*1*	*Highly programmable analogue synth*	*Feb 96*
Waldorf	Pulse Plus	£700	1	Expanded Pulse, extra analogue sync and external source options	
Will Systems	*MAB-303*	*£399*	*1*	*303 clone*	
Yamaha	EX5R	£1599	128	4 types of synthesis, 2 sequencers, as well as sampling	Jul 98
Yamaha	*MU5*	*£199*	*28*	*Entry-level GM in Walkstation style, but without sequencer or effects*	*Apr 95*
Yamaha	MU50	£349	32	Cut-down version of the MU80	Sep 95
Yamaha	*MU80*	*£599*	*64*	*GM/XG module with big polyphony and external input*	
Yamaha	MU90R	£549	64	Combination of Yamaha's soundcard technology to succeed the MU80	Spr 97
Yamaha	*MU100R*	*£849*	*64*	*Combines sample playback with physical modeling*	*Dec 97*
Yamaha	P50-m	£349	32	Piano module based on acclaimed Yamaha digital piano range	Feb 97
Yamaha	*QY300*	*£599*	*tbc*	*GM sound module, sequencer and auto-accompaniment player in one*	*Sep 94*

Yamaha	VL1-m	£2349	2	Rackmount version of VL-1 physical modeling synth	Dec 94
Yamaha	*VL70-m*	*£499*	*1*	*Very affordable virtual synthesis module*	*Dec 96*

ELECTRONIC PERCUSSION

MANUFACTURER	MODEL	PRICE	SOUNDS	DESCRIPTION	REVIEW
Alesis	DM5	£429	540	16-note poly, 21 drum kits, 4Mb ROM, 12 trigger inputs, 4 outs	
Alesis	*SR16*	*£249*	*233*	16-note poly, *100 drum kits, 100 songs, 400 patterns, 4 outs*	
Boss	DR-5	£319	96	Simple rhythm and bass line beat box	
Boss	*DR-550 Mk II*	*£285*	*96*	*Updated and restyled version of classic Dr Rhythm*	
Boss	DR-660	£459	255	Cost-conscious drum box with loads of sounds	
Clavia	*ddrum3*	*£3600*	*∞*	*Pro-spec electronic drumkit and trigger computer*	
E-mu	Procussion	£645	900	32-note poly, 16-part multi, 128 drum kits, 4Mb ROM, 6 outputs	
JoMoX	*XBase 09*	*£699*	*6*	*6 instruments, 100 drum kits, 10 songs, 64 patterns*	
Kawai	GB-2	£309	119	55 rhythms, 10 songs, card slot. Aimed at guitarists	
Korg	*WD1 Wave Drum*	*£1995*	*100*	*Physical modelling UFO-like synth drum*	*Jan 95*
Novation	DrumStation	£449	40	TR-808 and TR-909 sounds in a superbly programmable unit	Jul 96
Roland	*TD-5K*	*£1095*	*210*	*As the TD-5K/P without the stand*	
Roland	TD-5K/P	£1350	210	Basic electronic drum system with pads	
Roland	*TD-10*	*£1399*	*654*	*Modular 'brain' of the V-Drum system*	*Apr 98*
Roland	V-Drums	£2599	654	TD-10 module with PD100/PD120 pads, plus PD7, PD9, KD7, FD7 controllers	Apr 98
Yamaha	*DD9*	*£100*	*55*	*Beginners drum-pad system, 4 pads, 10 rhythms*	
Yamaha	RY8	£189	128	Walkman-like drum machine with backings and styles	
Yamaha	*RY20*	*£399*	*300*	*50 song presets, good sounds, effects and human groove feature*	*Oct 94*
Zoom	234 RhythmTrak	£199	174	Drum machine with pre-set patterns, bass sounds and 'groove' feature	

UPDATES... UPDATES... UPDATES...

Are you a manufacturer or distributor? Are your products listed in *The Mix Buyer's Guide*? To make sure that we have all your products correctly listed, please keep us updated with the latest prices and model names of all your current product ranges. If you do spot an inaccuracy, or change your prices, or delete a model, then please send us the correct details:

By email: **themix@futurenet.co.uk**

By post: ***The Mix Buyer's Guide***, **Future Publishing Ltd, 30 Monmouth Street, Bath BA1 2BW**

By fax: **01225 462986**

Remember, it's in your interest to be in the *Buyer's Guide*, so make sure you check your entry, and continue sending us information!

"These are all worthy additions to what I think are the best series of MIDI Files in the world", said analogue synth guru Pete Forrest of MIDI Breakbeats, Jazz - Piano Bass & Drums & Paul Kodish - Dangerous Drums in Music Mart.

We've had such a massive response to our "Drum Loopy" offer we are extending it by another month to give everyone the opportunity to see what all the fuss is about

Drums & Perc
MIDI Breakbeats
Paul Kodish -
Dangerous Drums

All 3 Drum Disks For only £49.95 Save £25.00

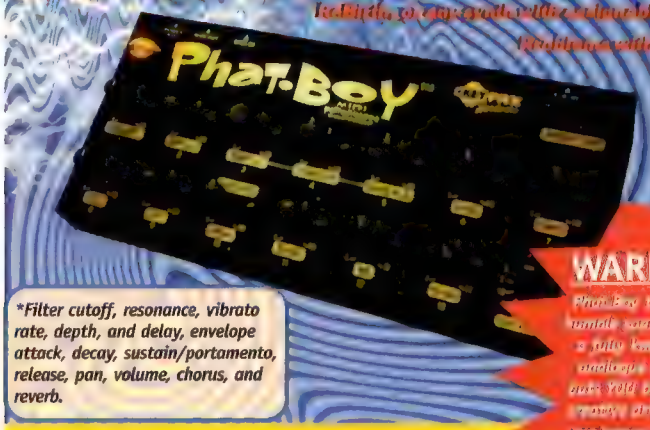
This **once only** offer allows you to use the players behind **Apollo 440, Prodigy, Incognito, Ice-T, Queen Latifah, Psygnosis, and more. Over 1500 Patterns** Plus awesome GS/XG Data!

Call now for latest catalogue, other products include: General Instruments, Gate Effects, Elec & Ac Guitars, Country, Funk, Programmers Toolkit, Jazz Piano, Bass & Drums, Jazz Solo Insts (IT'S HERE AT LAST), NEW MODULAR MADNESS NEW, "Rabbit" Bundrick Rock & Country Piano, Bill Bruford Packet of Three, LA Riot MIDI Drums

Platinum Awards:
Programmers Toolkit
Elec & Ac Guitars

Keyfax: PO Box 4408. Henley on Thames. Oxon. RG9 1FS.
01491 - 413938
01491 - 577147
uk@keyfax.com
www.keyfax.com

Do You Own a GS, XG or AWE Soundcard?
T.Bits, or any synth with a minijack CV/G.A.T.E.?
Problems with MIDI sync?



WARNING
Phat-Boy turns your humble sound card into a fully knobbable analogue synth. It puts YOU back in the driving seat. Programming tedium will be a thing of the past. Phat-Boy is addictive.

**Filter cutoff, resonance, vibrato rate, depth, and delay, envelope attack, decay, sustain/portamento, release, pan, volume, chorus, and reverb.*

Phat•Boy™ is a front panel for any GS/XG or AWE sound source. Phat•Boy™ gives you hands-on, real-time control over all the essential parameters* you need for producing vibrant, living, analogue-sounding music on your decidedly digital synth module.**

- FILTER SWEEP DRUMS
- ADD MODULATION OR HEAVY CHORUSING TO BASSLINES
- CREATE MULTI-TEXTURED PADS
- RECORD SOUND CHANGES IN REAL-TIME
- INSTANT ACCESS TO SOUNDS ACROSS 16 MIDI CHANNELS
- SNAPSHOT FEATURE FOR INSTANT SOUND PROGRAMMING
- COMES WITH FREE SET OF CUSTOM SMF LOOPS AND GROOVES
- SPECIAL CONTROLLER MODE FOR STEINBERG REBIRTH— CONTROL *THOSE SOUNDS* WITH REAL KNOBS!

"Way too cool to be true. Those top chaps at Keyfax have finally come up with the one thing that every XG owner wants..... Knobs".
www.Yamaha.co.uk.

Available from:
Keyfax Hardware.
Tel: 01491 577147
Et Cetera Distribution
Tel: 01706 228 039
(for store information)

**Roland GS, Yamaha XG, Steinberg Rebirth are all trademarks of their respective companies.

All Trade Enquiries to Et Cetera Distribution 01706 - 228039
Dealer packs for Phat•Boy & T.Bits available NOW!

KEYFAX Hardware

MICROPHONES

TYPE: Typically, condenser mics are more expensive than dynamic mics, but give higher sound quality. They require power to work, either from a battery or from phantom powering supplied by a mixer. Dynamic mics are more robust and so are generally used for live applications.

PATTERN: Mics have different directional responses. Omnidirectional mics respond to sound from all sides, unidirectional from just one direction. The latter category includes cardioid, hypercardioid and supercardioid mics, which have more-or-less heart-shaped patterns. Figure-of-8 mics are bi-directional with two active and two 'dead' spots. You can change the capsule on some mics to get a variable response.

FREQUENCY RESPONSE: Mics pick up sound over certain frequency ranges. Condenser mics generally have the widest frequency response, though many mics are optimised for the intended purpose (vocals, acoustic instruments, drums).

CONDENSER

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
AKG	C 12 VR	£2500	Large twin diaphragm, 8 patterns, 30Hz–20kHz, 2 filters, PSU	
AKG	*C 391 B*	*£350*	*SE 300 B and CK 91 bundle*	
AKG	C 411 PP	£125	Phantom-powered version of C 411 B	
AKG	*C 414 B-TLII*	*£1100*	*As C414 B-ULS, but with condenser based on C 12, 10Hz–20kHz*	
AKG	C 414 B-ULS	£1000	Large diaphragm condenser, 4 polar patterns, 20Hz–20kHz, 2 LF filters	
AKG	*C 416 B*	*£120*	*Hypercardioid, 20Hz–20kHz, battery powered, for guitar cabs, piano, organ cabinets*	
AKG	C 416 PP	£160	Phantom-powered version of C 416 B	
AKG	*C 418 B*	*£120*	*Hypercardioid, 50Hz–20kHz, battery powered, for drums and percussion*	
AKG	C 418 PP	£160	Phantom-powered version of C 418 B	
AKG	*C 419 B*	*£125*	*Hypercardioid, 20Hz–20kHz, battery powered, for brass and wind instruments*	
AKG	C 419 PP	£160	Phantom-powered version of C 419 B	
AKG	*C 480 B*	*£530*	*Modular capsule mike that uses CK 6-series capsule range, phantom powered*	
AKG	C 480 B/CK 61	£700	CK 61 capsule bundled with C 480 B mdular pre-amp	
AKG	*C 535 EB*	*£380*	*Cardioid, 20Hz–20kHz, 2 filters, phantom powered, for vocals*	
AKG	C 1000 S	£200	Cardioid/hypercardioid, 50Hz–20kHz, battery or phantom powered, general purpose	Oct 96
AKG	*C 3000*	*£300*	*Large diaphragm, cardioid/hypercardioid, 20Hz–20kHz, phantom powered*	*Oct 96*
AKG	CK 61	£200	Cardioid capsule for C 480 B, 20Hz–20kHz	
AKG	*CK 62*	*£200*	*Omnidirectional capsule for C 480 B, 20Hz–20kHz*	
AKG	CK 63	£200	Hypercardioid capsule for C 480 B, 20Hz–20kHz	
AKG	*CK 91*	*£180*	*Cardioid capsule for SE 300 B, 20Hz–20kHz*	
AKG	CK 92	£180	Omindirectional capsule for SE 300 B, 20Hz–20kHz	
AKG	*CK 93*	*£180*	*Hypercardioid capsule for SE 300 B, 20Hz–20kHz*	
AKG	CK 94	£400	Figure-of-8 capsule for SE 300 B, 20Hz–20kHz	
AKG	*SE 300 B*	*£180*	*Universal powering unit for CK 9-series capsules, phantom powered*	
AKG	SolidTube	£800	Cardioid, 20Hz–20kHz, LF roll-off filter, phantom powered, PSU	Jul 98
Audio-Technica	*AT4033a/SC*	*£652*	*Large diaphragm, cardioid, LF roll-off filter, phantom powered, stand clamp*	*Oct 96*
Audio-Technica	AT4033a/SK	£1390	2xAT4033a/SMs in flight case	
Audio-Technica	*AT4033a/SM*	*£695*	*Large diaphragm, cardioid, LF roll-off filter, phantom powered, shock mounted*	*Oct 96*
Audio-Technica	AT4041	£320	Cardioid, LF roll-off filter, phantom powered	Oct 96
Audio-Technica	*AT4049*	*£800*	*Omnidirectional, phantom powered*	
Audio-Technica	AT4049-ELE	£270	Omnidirectional element for AT4900-48 pre-amp	
Audio-Technica	*AT4050/SC*	*£945*	*Large diaphragm, 3 patterns, phantom powered, stand clamp*	
Audio-Technica	AT4050/SK	£1990	2xAT4050/SMs in flight case	
Audio-Technica	*AT4050/SKSC*	*£1890*	*2xAT4050/SCs in flight case*	
Audio-Technica	AT4050/SM	£995	Large diaphragm, 3 patterns, phantom powered, shock mounted	
Audio-Technica	*AT4051*	*£800*	Cardioid, *phantom powered*	
Audio-Technica	AT4051-ELE	£270	Cardioid element for AT4900-48 pre-amp	
Audio-Technica	*AT4053-ELE*	*£320*	*Hypercardioid element for AT4900-48 pre-amp*	
Audio-Technica	AT4900-48	£560	Pre-amplifier for AT40-ELE series	
Audio-Technica	*AT5053*	*£850*	*Hypercardioid, phantom powered*	
Audio-Technica	ATM10a	£130	Omindirectional electret, battery or phantom powered	
Audio-Technica	*ATM31a*	*£150*	*Cardioid* electret, *battery or phantom powered*	
Audio-Technica	ATM33a	£150	Cardioid electret, battery or phantom powered, for instruments and vocals	
Audio-Technica	*ATM35*	*£228*	*Cardioid* electret, clip-on mount, battery or phantom powered, for instruments	
Audio-Technica	ATM87R	£200	Unidirectional, LF roll-off filter, integral pre-amp, phantom powered, for kick drums	
Audio-Technica	*ATM89R*	*£200*	*Hypercardioid electret (other capsules available), 70Hz–20kHz, phantom powered*	*Mar 98*
Audio-Technica	MB4000C	£100	Cardioid, on/off switch, battery or phantom powered	
Audio-Technica	*PRO35x*	*£140*	*Cardioid, miniature clip-on, phantom powered, for instruments*	
Audio-Technica	PRO37R	£130	Cardioid, phantom powered, for instruments	
Audio-Technica	*PRO95R*	*£100*	*Hypercardioid, clip-on, battery powered, for instruments*	
Audio-Technica	Studio 6 Pack	£860	2xATM10a, 2xATM31a, 2xATM33a and 1xATM25 dynamic, in carrying case	
Beyerdynamic	*MC 711*	*£528*	*Omnidirectional, 40Hz–20kHz, LF roll-off filter, phantom powered*	
Beyerdynamic	MC 713	£586	Cardioid, 40Hz–20kHz, LF roll-off filter, phantom powered	
Beyerdynamic	*MC 740*	*£1291*	*Large diaphragm, 5 patterns, 20Hz–20kHz, 3 filters, phantom powered*	
Beyerdynamic	MC 834	£868	Cardioid, 2 filters, for vocals, acoustic guitar	Oct 96
Beyerdynamic	*MCE 80 TG*	*£293*	*Cardioid, 50Hz–18kHz, battery or phantom powered*	
Beyerdynamic	MCE 81 TG	£199	Cardioid electret, 50Hz–18kHz, phantom powered, for vocals	
Beyerdynamic	*MCE 83*	*£222*	*Cardioid, 40Hz–20kHz, phantom powered*	*Nov 95*
Beyerdynamic	MCE 84	£269	Cardioid, 40Hz–20kHz, battery or phantom powered	
Beyerdynamic	*MCE 90*	*£tbc*	*Large diaphragm, cardioid, LF filter, phantom powered, for studio vocals, instruments*	
Beyerdynamic	MCE 91	£tbc	*Large diaphragm, cardioid,* for live or studio vocals	
Beyerdynamic	*MCE 93*	*£tbc*	*Large diaphragm, cardioid, phantom powered, for live or studio instruments*	
Beyerdynamic	MCE 94	£269	*Large diaphragm, cardioid,* battery or phantom powered, for instruments	
Beyerdynamic	*TG-X 30.15*	*£304*	*Omnidirectional electret, 30Hz–20kHz, head-worn*	
Beyerdynamic	TG-X 35.15	£304	Cardioid electret, 40Hz–17kHz, head-worn	
Brüel & Kjær	*4006*	*£1234*	*Mike with interchangeable acoustic equalisers (£67–106)*	
CAD	Equitek E-100	£299	Supercardioid electret, 10Hz–18kHz, LF roll-off filter, battery or phantom powered	Feb 97
CAD	*Equitek E-200*	*£449*	*2 cardioid, 3 pattern, 10Hz–18kHz, LF roll-off filter, battery or phantom powered*	*Feb 97*
CAD	Equitek E-300	£699	2 cardioid, 3 pattern, 10Hz–20kHz, LF roll-off filter, battery or phantom powered	Feb 97
Earthworks	*OM1*	*£499*	*Omnidirectional, 12Hz–22kHz, phantom powered, for acoustic guitar, electric bass*	*Dec 96*
Earthworks	QTC1	£975	Omnidirectional, for ambient recording and delicate sources	
Earthworks	*Z30X*	*£975*	*Cardioid, 30Hz–30kHz, for close-miked instruments and vocals*	

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Electro-Voice	RE 200	£279	Cardioid, for live or studio, choirs or ensemble instruments	Oct 96
Groove Tubes	*MD1a*	*£599*	*Tube condenser, cardioid*	*Mar 96*
Groove Tubes	MD2a	£989	Tube condenser, cardioid	Mar 96
Groove Tubes	*MD3a*	*£1369*	*Tube condenser, cardioid, sub-cardioid, omni*	*Mar 96*
Groove Tubes	MD5sc	£499	Cardioid, includes case and shockmount	
Langevin	*CR-3A*	*£464*	*Cardioid capacitor, LF roll-off filter, for vocals*	*Oct 96*
Microtech Gefell	UM 900	£tbc	Large diameter capsule, 5 positions, switchable sensitivity, LF roll-off filter	
Neumann	*KM100*	*£236*	*Interchangeable capsule mike that uses the AK capsule range (£640–808)*	
Neumann	TLM 103	£699	Large diaphragm, cardioid, 20Hz–20kHz, phantom-powered	Aug 98
Neumann	*TLM 193*	*£999*	*Cardioid, for vocals*	*Oct 96*
Oktava	MK210	£257	Now with lifetime guarantee	
Peavey	*PM 16S*	*£140*	*tbc*	
Peavey	PSM 2	£147	tbc	
Peavey	*PVM 357*	*£200*	*tbc*	
Peavey	PVM T9000	£955	tbc	
Røde	*NT1*	*£329*	*Cardioid, for vocals, instruments*	*Aug 97*
Røde	NT2	£499	Omnidirectional/cardioid, LF roll-off filter, for vocals, acoustic guitar	Oct 96
Sennheiser	*K6*	*£206*	*Powering module with bass attenuator, integral XLR connector*	
Sennheiser	ME 62	£129	Omnidirectional capsule for K6 system	
Sennheiser	*ME 64*	*£152*	*Cardioid capsule for K6 system*	
Sennheiser	ME 65	£200	Supercardioid vocal capsule for K6 system	
Shure	*BG4.1*	*£182*	*40Hz–18kHz, battery or phantom powered, for live or studio instruments*	*Spr 97*
Shure	BG5.1	£182	70Hz–16kHz, battery or phantom powered, for live or studio vocals	Spr 97
Shure	*BETA 87*	*£381*	*Supercardioid, 50Hz–16kHz, phantom powered, for live vocals*	*Oct 96*
Shure	Prologue 16L-LC	£93	Cardioid, 50Hz–15kHz, battery powered, for live or studio acoustic instruments	
Shure	*SM81-LC*	*£444*	*Cardioid, 20Hz–20kHz, phantom powered, for live or studio acoustic sources*	
Shure	SM87-LC	£294	Supercardioid, 50Hz–16kHz, phantom powered, for live vocals	
Shure	*SM94-LC*	*£237*	*Supercardioid, 50Hz–16kHz, battery or phantom powered, multipurpose*	
Shure	SM98A	£257	Cardioid/supercardioid, 40Hz–20kHz, phantom powered, for acoustic instruments	
Sony	*C-38B*	*£679*	*Cardioid/omni-/bi-directional, low noise, precision capsule*	
Sony	C-48	£1011	Cardioid/omni-/bi-directional, LC filter, large diaphragm	
Sony	*ECM-23*	*£197*	*Cardioid studio mic, wide dynamic range*	
Soundfield	SPS422	£1875	4 sub-cardioid, infinite patterns, 20Hz–20kHz, LF roll-off filter, PSU	Aug 96
Tandy	*Optimus PZM*	*£40*	*Electret condenser mic, battery powered*	

DYNAMIC

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
AKG	D 65S	£50	Unidirectional, 70Hz–20kHz, on/off switch, for vocals, instruments	
AKG	*D 112*	*£200*	*Large diaphragm, 20Hz–17kHz, for kick drums*	
AKG	D 770	£80	Cardioid, 60Hz–20kHz, for instruments, vocals	
AKG	*D 880*	*£85*	*Hypercardioid, 60Hz–20kHz, anti-vibration system, for lead and backing vocals*	
AKG	D 880S	£90	As D 880, but with on/off switch	
AKG	*D 3700*	*£100*	*Hypercardiod, 50Hz–20kHz, for vocals*	*Sep 96*
AKG	D 3700S	£110	As D 3700, but with on/off switch	
AKG	*D 3800*	*£170*	*Hypercardioid, 40Hz–21kHz, for vocals*	
Audio-Technica	AT804	£100	Omnidirectional, rugged	
Audio-Technica	*ATM23He*	*£150*	*Hypercardioid, 70Hz–16kHz, for percussion*	*Mar 98*
Audio-Technica	ATM25	£175	Hypercardioid, for kick drums and toms	
Audio-Technica	*ATM27He*	*£100*	*Hypercardoid, for vocals, instruments*	
Audio-Technica	ATM29He	£100	Hypercardoid, for instruments, vocals	
Audio-Technica	*ATM41a*	*£95*	*Cardioid, for vocals*	
Audio-Technica	ATM41He	£120	Hypercardioid, for vocals	
Audio-Technica	*ATM61He*	*£130*	*Hypercardioid, for vocals, instruments*	
Audio-Technica	ATM63He	£130	Hypercardioid, for instruments, vocals	
Audio-Technica	*ATR20*	*£20*	*Unidirectional, 80Hz–12kHz, for vocals, instruments*	
Audio-Technica	ATR30	£35	Unidirectional, 60Hz–12kHz, for vocals, instruments	
Audio-Technica	*ATR40*	*£55*	*Unidirectional, 60Hz–12kHz, for vocals, instruments*	
Audio-Technica	MB1000H	£65	Cardioid, on/off switch, high impedance, available in low impedance version	
Audio-Technica	*MB2000L*	*£80*	*Cardioid, on/off switch*	
Audio-Technica	MB3000L	£95	Cardioid, on/off switch	Sep 96
Audio-Technica	*PRO4H*	*£65*	*Cardioid, high impedance, available in low impedance version*	
Audio-Technica	PRO5X	£110	Cardioid, on/off switch, for vocals	
Audio-Technica	*PRO6*	*£130*	*Cardioid, on/off switch, for instruments, vocals*	
Audio-Technica	PRO10HE	£138	Hypercardioid, for vocals	
Audio-Technica	*PRO25*	*£95*	*Hypercardioid, enhanced bass response*	
Audio-Technica	PRO27HE	£100	Hypercardioid, for vocals	
Audio-Technica	*PRO29HE*	*£100*	*Hypercardioid, for vocals*	
Audix	D-1	£149	Hypercardioid, 38Hz–21kHz, for snare drums, cymbals, brass	Jul 97
Audix	*D-2*	*£149*	*Hypercardioid, 38Hz–21kHz, for toms, percussion, horns*	*Jul 97*
Audix	D-3	£149	Hypercardioid, 38Hz–21kHz, for kick drums, amps	Jul 97
Audix	*OM-3xb*	*£119*	*Hypercardioid, 38Hz–21kHz, for live vocals*	*Nov 96*
Audix	OM-5	£199	Hypercardioid, 40Hz–20kHz, for live vocals	
Audix	*OM-7*	*£249*	*Hypercardioid, 38Hz–21kHz, for live vocals*	*Nov 96*
Benson	BA25	£50	Cardioid, 50Hz–15kHz, for live vocals	Sep 97
Benson	*BA30*	*£60*	*Cardioid, 50Hz–15kHz, for live vocals and instruments*	*Sep 97*
Benson	ND90	£120	Hypercardioid, 50Hz–18kHz, for live vocals	Sep 97
Beyerdynamic	*Drum Package*	*£551*	*4xTG-X 5, 1xTG-X 50*	
Beyerdynamic	M 01	£69	Supercardioid, 50Hz–15kHz, for vocals and instruments	
Beyerdynamic	*M 02*	*£76*	*Supercardioid, 50Hz–15kHz, for vocals*	
Beyerdynamic	M 03	£81	As M 02, but with on/off switch	
Beyerdynamic	*M 04*	*£88*	*Supercardioid, 40Hz–16kHz, for vocals and instruments*	
Beyerdynamic	M 05	£93	As M 04, but with on/off switch	

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Beyerdynamic	M 69 TG	£199	Hypercardioid, 50Hz–16kHz, for vocal sources	
Beyerdynamic	*M 88 TG*	*£316*	*Hypercardioid, 30Hz–20kHz, for vocals, brass and kick drums*	*Sep 96*
Beyerdynamic	M 201	£234	Hypercardioid, 40Hz–18kHz, for toms	
Beyerdynamic	*M 300 TG*	*£116*	*Cardioid, 50Hz–15kHz, for vocals*	
Beyerdynamic	M 300 TG	£128	As above, but with on/off switch	
Beyerdynamic	*M 420 TG*	*£163*	*Hypercardioid, 100Hz–12kHz, for vocals and percussion*	
Beyerdynamic	M 422 TG	£93	Supercardioid, 100Hz–12kHz, for snare drums and other acoustic sources	
Beyerdynamic	*TG-X 5*	*£105*	*Hypercardioid, 40Hz–12kHz, for percussion*	
Beyerdynamic	TG-X 10	£tbc	Supercardioid, for drums, percussion	
Beyerdynamic	*TG-X 20*	*£163*	*Hypercardioid, 45Hz–16kHz, for vocals, amps*	
Beyerdynamic	TG-X 21	£175	As TG-X 20, but with on/off switch	
Beyerdynamic	*TG-X 40*	*£187*	*Hypercardioid, 35Hz–16kHz, for acoustic sources*	
Beyerdynamic	TG-X 41	£199	As TG-X 40, but with on/off switch	
Beyerdynamic	*TG-X 50*	*£222*	*Hypercardioid, 15Hz–18kHz, for percussion*	
Beyerdynamic	TG-X 60	£199	Hypercardioid, 40Hz–18kHz, for vocals	Sep 96
Beyerdynamic	*TG-X 61*	*£246*	*As TG-X 60, but with on/off switch*	
Beyerdynamic	TG-X 80	£273	Hypercardioid, 30Hz–18kHz, for acoustic sources	
Beyerdynamic	*TG-X 81*	*£304*	*As TG-X 81, but with on/off switch*	
Electro-Voice	N/D 157B	£106	Cardioid, for vocals	
Electro-Voice	*N/D 967*	*£300*	*Supercardioid, for vocals and instruments*	
JHS	GM55	£69	Unidirectional, 50Hz–18kHz, on/off switch, '50s styling	
JHS	*MUD525*	*£24*	*Unidirectional, 80Hz–12kHz, dual impedance, built-in pop screen*	
JHS	MUD616	£30	Cardioid, 80Hz–12kHz, on/off switch, built-in pop screen, for live or studio	
JHS	*MUD637*	*£25*	*Cardioid, 80Hz–12kHz, on/off switch, built-in pop screen, for live or studio*	
JHS	MUD916	£50	Unidirectional, 50Hz–18kHz, on/off switch, or live or studio, vocals or instruments	
Peavey	*PV*	*£51*	*tbc*	
Peavey	PVi	£30	Available in XLR/XLR or XLR/jack versions	
Peavey	*PVM 22*	*£100*	*Cardioid, for live lead or backing vocals*	
Peavey	PVM 38i	£102	tbc	
Peavey	*PVM 45i*	*£102*	*tbc*	
Peavey	PVM 80	£112	tbc	
Peavey	*PVM 480*	*£132*	*tbc*	
Peavey	PVM 520i	£144	tbc	
Peavey	*PVM 535i*	*£123*	*tbc*	
Peavey	PVM 580i	£112	tbc	
Peavey	*PVM 835*	*£195*	*tbc*	
Peavey	PVM 880	£195	tbc	
Roland	*D-10*	*£49*	*Hypercardioid, for vocals, bass guitar, kick drum*	*May 97*
Roland	D-20	£89	Hypercardioid, for vocals, cymbals, hi-hats	May 97
Samson	*QMIC*	*£tbc*	*Hypercardioid, 20Hz–18.5kHz, for vocals, instruments*	
Sennheiser	BF 504	£108	Cardioid instrument mic	
Sennheiser	*BF 521*	*£278*	*Cardioid all-purpose mic suitable for live and studio work*	
Sennheiser	BF 531 II	£300	Supercardioid, adjustable inlet basket, for vocals	Sep 96
Sennheiser	*Drum Set 504*	*£519*	*4xMD 504 with 4xMZH 504 universal drum clamps in a case*	
Sennheiser	MD 421	£337	As BF 521, but with 5 position LF roll-off switch	
Sennheiser	*MD 425*	*£200*	*Supercardioid, feedback rejection, on-off switch, for vocals*	
Sennheiser	MD 431 II	£300	Supercardioid, feedback rejection, on-off switch, for vocals, instruments	
Sennheiser	*MD 441U*	*£586*	*Supercardioid, bass- and treble-cut switches, for studio vocals*	
Sennheiser	MD 504	£125	Cardioid instrument mic with drum clamp	
Sennheiser	*MD 735-US*	*£102*	*Supercardioid, feedback rejection, for vocals*	
Sennheiser	MD 736	£114	As MD 735-US, but with on/off switch	Sep 96
Shure	*520D*	*£116*	*Omnidirectional, 100Hz–5kHz, for harmonicas*	
Shure	55SH Series II	£233	Cardioid, 50Hz–15kHz, for live vocals with a nostalgic appearance	
Shure	*BETA 52*	*£264*	*Supercardioid, 20Hz–10kHz, for live kick drums*	
Shure	BETA 56	£176	Supercardioid, 50Hz–16kHz, for live drums, instruments	
Shure	*BETA 57A*	*£159*	*Supercardioid, 50Hz–16kHz, for live acoustic or electric instruments, vocals*	*Sep 96*
Shure	BETA 58A	£194	Supercardioid, 50Hz–16kHz, for live vocals	
Shure	*BG1.1*	*£42*	*80Hz–12kHz, for live or studio, vocals or instruments*	*Spr 97*
Shure	BG2.1	£62	70Hz–13kHz, for live vocals	Spr 97
Shure	*BG3.1*	*£76*	*60Hz–14kHz, for live backing vocals, guitar cabs*	*Spr 97*
Shure	BG6.1	£115	80Hz–15kHz, for live drums and percussion, amps, brass, woodwind	Spr 97
Shure	*Prologue 10H-LC*	*£37*	*Cardioid, 80Hz–10kHz, for live or studio instruments*	
Shure	Prologue 10L-LC	£29	Low impedance version of 10H-LC	
Shure	*Prologue 12H-LC*	*£49*	*Cardioid, 80Hz–10kHz, for vocals*	
Shure	Prologue 12L-LC	£45	Low impedance version of 12H-LC	
Shure	*Prologue 14H-LC*	*£58*	*Cardioid, 40Hz–13kHz, for vocals*	
Shure	Prologue 14L-LC	£53	Low impedance version of 14H-LC	
Shure	*Prologue 22L-LC*	*£54*	*Supercardioid, 40Hz–13kHz, for live vocals*	
Shure	Prologue 24L-LC	£67	Supercardioid, 40Hz–13kHz, for live vocals	
Shure	*SM7*	*£464*	*Cardioid, 40Hz–16kHz, switchable response, LF roll-off filter, for vocals*	
Shure	SM10A-CN	£181	Cardioid, 50Hz–15kHz, for live vocals, head-worn	
Shure	*SM12A-CN*	*£253*	*As SM10A-CN, but with 1 in-ear monitor*	
Shure	SM48-LC	£76	Cardioid, 55Hz–15kHz, for live vocals	
Shure	*SM48S-LS*	*£88*	*As SM48-LC, but with on/off switch*	
Shure	SM57-LC	£112	Cardioid, 40Hz–15kHz, for live drums and percussion, amps	
Shure	*SM58-LC*	*£121*	*Cardioid, 50Hz–15kHz, for live vocals*	*Sep 96*
Shure	SM58S	£141	As SM58-LC, but with on/off switch	Sep 96
Sony	*F-720*	*£115*	*Cardioid, high sensitivity, general use mic*	
Sony	F-740	£147	Vocal and percussive instrument mic	
Sony	*F-780*	*£205*	*Top-of-the-range vocal mic, low handling noise, rugged design*	
Studiomaster	KM51	£53	For vocals and instruments	
Studiomaster	*KM81*	*£70*	*For vocals and instruments*	*Sep 96*

Do You Want To Be A Sound Engineer?

WE PROVIDE THE KNOWLEDGE, THE GEAR & GUARANTEE
MORE PRACTICAL TIME THAN ANY OTHER COLLEGE

YOU GET OVER 1000 HOURS of HANDS ON, INDIVIDUAL PRACTICAL TIME ON OUR INTENSIVE FULL TIME DIPLOMA COURSE AND OVER 400 HOURS, ON OUR YEAR LONG, PART TIME COURSE

SSL G Series with automation, Euphonix CS3000, Soundcraft, Trident & Yamaha Consoles
PC, Mac & Atari Computers. Running Logic & Cubase Audio,
Soundscape, Cooledit Pro & Fairlight DAW's Mics by Neumann, AKG,Schoeps, EV, Beyer, MB, Calrec, Shure etc

CREATING THE NEXT GENERATION of AUDIO PROFESSIONALS

ALCHEMEA
College of Audio Engineering

See our Web Site:
www.alchemea.demon.co.uk
for more details. Including on line registration documents.
Or contact us for a free Prospectus & further details

ALCHEMEA College of Audio Engineering
The Windsor Centre, Windsor Street, London N1 8QH
Tel 0171-359-4035 E-mail: info@alchemea.demon.co.uk
FAX: 0171-359-4027

MIXERS

FORMAT: Stereo mixers reduce all the input signals to a stereo pair, while 4- and 8-buss models allow you to output signals directly from their busses, as well as the main stereo outputs.
EQ: On a budget stereo mixer, you may expect only a simple 2-band EQ, but on a good 8-buss mixer, you'll find quite a sophisticated 4-band EQ section. This will include fixed high and low bands, and two sweepable (semi-parametric) mid-range bands, where you can alter the centre of frequency cut/boost. Full parametric EQs have controls for frequency, cut/boost, and bandwidth (Q).
AUXS: Auxiliaries can be used to send signals to either external effects processors or to headphones/speakers for monitoring. Aux sends may be switchable, meaning that two processors may be connected, but only one can be used at once.

STEREO

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
3G	Mynah 8:2	£411	8:2	3-band EQ, 2 aux	Oct 95
3G	*Mynah 12:2*	*£581*	*12:2*	*3-band EQ, 2 aux*	*Oct 95*
3G	Mynah 16:2	£699	16:2	3-band EQ, 2 aux	Oct 95
3G	*Mynah Si*	*£586*	*10:2:1*	*3-band EQ, 2 aux, stereo inputs, stereo pre-amp*	*Oct 95*
3G	Mynah SiRM	£582	12:2:1	Rackmount version of Mynah Si	Oct 95
Allen & Heath	*WZ16:2*	*£917*	*16:2*	*4-band EQ, 2 sweeps, 6 aux, 2 stereo returns*	
ARX	MaxiMix	£439	Dual 4:2	1U rackmount line mixer	
ARX	*MIXX*	*£517*	*4:2*	*3-band EQ, 1U rackmount line mixer*	
ARX	MIXXMaster	£466	4:2	3-band EQ, 2 mic, 2 stereo line inputs, 1U rackmount	
Audio Toys	*8MX2*	*£1757*	*8:2*	*Balanced XLRs, 8 limiters, phase reversal, 2-track return*	*Jun 97*
Behringer	MX 802	£169	8:2	3-band EQ, 2 sends, 2 stereo returns, phantom power	Aug 97
Behringer	*MX 1602*	*£229*	*16:2*	*3-band EQ, 2 sends, 2 stereo returns, phantom power*	*Nov 96*
Behringer	MX 2802	£649	28:2	3-band EQ, 8 monos have mid sweep, 6 aux, rackable	
Boss	*BX-4*	*£128*	*4:2*	*Basic 4 in, 2 out specification*	
Boss	BX-80	£364	8:2	2-band EQ, 1 send	
Fostex	*2016*	*£406*	*16:2*	*Rackmountable, also configurable as 8:8:2*	
Fostex	MN06	£99	6:2	Simple mini-mixer	
Mackie	*LM-3204*	*£899*	*32:2*	*Rackmount sub-mixer, 16 stereo ins, 3-band EQ, 1 sweep, 2 sends, 4 returns*	*Apr 95*
Mackie	MS1202-VLZ	£399	12:2	4 mic pre-amps, 3-band EQ, 2 sends, with very low impedance circuitry	Nov 96
Mackie	*MS1402-VLZ*	*£549*	*14:2*	*Mic pre-amps, 3-band EQ, 2 sends, with very low impedance circuitry*	*Nov 96*
Midiman	Micromixer 18	£199	18:2	Half-rack, single-height mixer with gain, pan, aux sends	
Midiman	*Minimixer*	*£69*	*8:1*	*Digital-quality line mixer; can be configured as 4:2*	*Nov 95*
Midiman	Multimixer 6	£79	6:2.	Line mixer with volume, pan and headphone jack	
Peavey	*SRC 4026*	*£1559*	*tbc*	*tbc*	
Peavey	SRC 4034	£1899	tbc	tbc	
Peavey	*SRC 6024*	*£2079*	*tbc*	*tbc*	
Peavey	Unity 1002-RQ	£280	tbc	tbc	
Peavey	*Unity 1002-RQ RM*	*£300*	*tbc*	*Rack-mounting version of 1002-8 RQ*	
Peavey	Unity 2002-12 RQ	£390	12:2	12 mic pre-amps, 3-band EQ, 4 sends, 2 stereo returns, phantom power	Jun 98
Peavey	*Unity 2002-16 RQ*	*£390*	*16:2*	*tbc*	
Peavey	Unity 2002-24 RQ	£390	24:2	tbc	
Phonic	*MM122*	*£234*	*12:2*	*4 mic/line mono, 4 stereo, 2-band EQ, 2 sends, phantom power*	*Spr 97*
Phonic	PMC802B	£351	8:2	Mic pre-amps, 3-band EQ, 3 sends, 2 returns, phantom power	
Phonic	*PMC1202B*	*£469*	*12:2*	*Mic pre-amps, 3-band EQ, 3 sends, 2 returns, phantom power*	
Phonic	PMC1602B	£586	16:2	Mic pre-amps, 3-band EQ, 3 sends, 2 returns, phantom power	
Phonic	*PMC2402B*	*£799*	*24:2*	*Mic pre-amps, 3-band EQ, 3 sends, 2 returns, phantom power*	
Roland	M-160	£899	16:2	4U rackmount mixer, no EQ, 3 sends	
Roland	*MX-5*	*£140*	*8:2*	*Mini mixer*	
Samson	Mixpad 9	£199	9:2	2-band EQ, 2 sends	
Samson	*Mixpad 12*	*£275*	*12:2*	*2-band EQ, 2 sends*	
Samson	MPL1502	£299	15:2	Rackmount mixer, 2-band EQ, 2 sends	
Samson	*MPL1640*	*£599*	*16:2*	*Rackmount mixer, 3-band EQ, 4 sends*	
Samson	PL1602	£269	16:2	Rackmount line mixer, 1 send	
Samson	*PL2404*	*£549*	*24:2*	*Rackmount line mixer, 1 send*	
Soundtracs	Topaz Macro	£469	14:2	10 mic pre-amps, 3-band EQ, 2 sends, 2 stereo returns	Nov 96
Soundtracs	*Topaz Mini*	*£350*	*12:2*	*Compact mixer, 4 mono, 4 stereo, 3-band EQ, 2 sends*	*Nov 96*
Spirit By Soundcraft	Folio F1	£299	14:2	6 mic pre-amps, 3-band EQ, 1 sweep, 3 sends, 3 returns, phantom power	Jan 97
Spirit By Soundcraft	*Folio F1*	*£349*	*16:2*	*8 mic pre-amps, 3-band EQ, 1 sweep, 3 sends, 3 returns, phantom power*	*Jan 97*
Spirit By Soundcraft	Folio FX8	£439	8:2	8 mic pre-amps, 3-band EQ, 1 sweep, 3 sends, 4 stereo returns, phantom power	
Spirit By Soundcraft	*Folio FX16*	*£849*	*16:2*	*16 mic pre-amps, 3-band EQ, 1 sweep, 4 sends, 4 stereo returns, phantom power*	*May 98*
Spirit By Soundcraft	Folio Notepad	£149	8:2	4 mic pre-amps, 2-band EQ, 1 send, 1 stereo return, phantom power	Nov 96
Studiomaster	*Club2000 102*	*£276*	*10:2*	*3-band EQ, 2 sends, 1 stereo return, phantom power*	
Studiomaster	Club2000 142	£323	14:2	3-band EQ, 2 sends, 1 stereo return, phantom power	
Studiomaster	*Club2000 182*	*£410*	*18:2*	*3-band EQ, 2 sends, 1 stereo return, phantom power*	
Studiomaster	Club DSP	£398	10:2	3-band EQ, 1 sweep, 2 sends, 1 stereo return, phantom power, digital effects	
Studiomaster	*Diamond Compact*	*£70*	*4:2*	*Battery powered mini mixer with jacks/phonos*	
Studiomaster	Diamond Compact	£82	4:2	Battery powered mini mixer with XLRs/phonos	
Studiomaster	*Pro2 163*	*£586*	*16:3*	*3-band EQ, 1 sweep, 5 sends, 4 stereo returns, phantom power, rackmountable*	
Studiomaster	Pro2 203	£704	20:3	3-band EQ, 1 sweep, 5 sends, 4 stereo returns, phantom power	
Studiomaster	*Rotary Club 12*	*£229*	*12:2*	*3-band EQ, 2 sends, 1 stereo return, phantom power, rackmountable*	
Tascam	M-08	£299	12:2	Mic pre-amps, 2-band EQ, 2 sends, 2 stereo returns, phantom power	Nov 96
Tascam	*M1016*	*£999*	*16:2*	*3-band EQ, 1 sweep, 6 sends, 4 stereo, 2 mono returns*	
Tascam	MkII	£349	8:2	Line level rackmount mixer	
TL Audio	*M1*	*£3819*	*8:2*	*Hand-built valve mixer, 4-band EQ, no aux*	
TL Audio	M2	£4994	8:2	As M1 mixer, but with faders and direct outs	
Vestax	*RMC-88*	*£395*	*8:2*	*Rackmount, 3-band EQ, 3 sends*	

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
Yamaha	MM1242	£749	12:2	Rackmount mixer, 4 sends	
Yamaha	*MM1402*	*£429*	*14:2*	*Mic pre-amps, 3-band EQ, 2 sends, 2 stereo returns, 5-band graphic EQ*	*Nov 96*
Yamaha	MV802	£489	8:2	Rackmount mixer, 2 sends	
Yamaha	*01v*	*£1399*	*24:2*	*12 mic pre-amps, 2-/4-band parametric EQ, 4 sends, 2 stereo returns, effects*	*Jun 98*

4-BUSS

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
3G	Mynah 16:4:3	£999	16:4:2	4-buss version of Mynah 16:2 with built-in noise gate	Oct 95
3G	*Signet*	*£2467*	*16:4:2:1*	*4-band EQ, 2 sweeps, 8 sends*	
3G	Signet	£3484	24:4:2:1	4-band EQ, 2 sweeps, 8 sends	
Alesis	*Studio 32*	*£1099*	*32:4:2*	*3-band EQ, 1 sweep with Q, 6 sends, rackable*	*Sum 98*
Allen & Heath	WZ14:4:2	£960	14:4:2	4-band EQ, 2 sweeps, 6 sends, 4 stereo returns, FOH and monitor modes	Dec 96
Behringer	*MX 2642*	*£749*	*26:4:2*	*3-band EQ, 8 monos have mid sweep, 6 aux, rackable*	*Dec 96*
Mackie	24-4	£1495	24:4:2	3-band EQ, 2 sweeps, 6 sends	
Mackie	*32-4*	*£1795*	*32:4:2*	*32-channel version of 24:4*	
Mackie	CR1604-VLZ	£949	16:4:2	3-band EQ, 1 sweep, 6 sends, 4 stereo returns, phantom power	Dec 96
Phonic	*M1642*	*£1598*	*16:4:2*	*Mic pre-amps, 3-band EQ, 1 sweep, 6 sends, 2 stereo returns, phantom power*	
Phonic	M2442	£1939	24:4:2	Mic pre-amps, 3-band EQ, 1 sweep, 6 sends, 2 stereo returns, phantom power	
Samson	*MPL1204*	*£549*	*12:4:2*	*Rackmount mixer, 2-band EQ, 4 sends*	
Samson	MPL2242	£749	22:4:2	Rackmount mixer, 4-band EQ, 6 sends	Feb 95
Soundtracs	*Topaz 14-4*	*£450*	*14:4:2*	*10 mono, 2 stereo, 3-band EQ, 2 sends*	
Soundtracs	Topaz Maxi 24	£1938	24:4:2	4-band EQ, 2 sweeps, 8 sends, automation ready	
Soundtracs	*Topaz Maxi 32*	*£2291*	*32:4:2*	*4-band EQ, 2 sweeps, 8 sends, automation ready*	
Spirit By Soundcraft	Folio FX16	£846	16:4:2	16 mic pre-amps, 3-band EQ, 1 sweep, 4 aux, phantom power, prog Lexicon effects	
Spirit By Soundcraft	*Folio SX*	*£479*	*20:4:2*	*12 mic pre-amps, 3-band EQ, 1 sweep, 3 sends, phantom power*	*Dec 96*
Studiomaster	Pro2 163	£586	16:3	3-band EQ, 1 sweep, 5 sends, 4 stereo returns, phantom power, rackmountable	
Studiomaster	*Pro2 203*	*£704*	*20:3*	*3-band EQ, 1 sweep, 5 sends, 4 stereo returns, phantom power*	
Studiomaster	Trilogy 166	£704	16:4:2	3-band EQ, 1 sweep, 6 sends, 4 stereo returns, also can function as live desk	
Studiomaster	*Trilogy 206*	*£880*	*20:4:2*	*3-band EQ, 1 sweep, 6 sends, 4 stereo returns, also can function as live desk*	*Mar 97*
Studiomaster	Trilogy 326	£1199	32:4:2	3-band EQ, 1 sweep, 6 sends, 4 stereo returns, also can function as live desk	
Studiomaster	*Trilogy 140EX*	*£586*		*10 mono mic, 2 stereo line, rackmountable expander*	
Tascam	TM-D1000	£899	16:4:2	Digital desk with 8 analogue ins, effect and dymanics processors	Nov 98
Yamaha	*03D*	*£2999*	*16:4:2*	*4-band parametric EQ, 2 effects, 40 dynamics processors, expandable to 26:8:2*	*Spr 97*
Yamaha	MX12/4	£399	12:4	3-band EQ, 2 sends, 2 returns, stereo digital reverb, 7-band graphic EQ	Sep 97

8-BUSS

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
3G	Signet	£1052	24:8:2:1	8-buss version of 4-buss Signet	
3G	*Signet*	*£960*	-	*8-channel expander for Signet 8-buss range*	
3G	Silk 16:8:16:2	£2402	16:8:16:2	4-band EQ, 2 sweeps, 4 sends	
3G	*Silk 24:8:16:2*	*£2908*	*24:8:16:2*	*4-band EQ, 2 sweeps, 4 sends*	
Allen & Heath	GS3000	£3804	24:8:2	4-band EQ, 2 sweeps, 2 valve mic/guitar pre-amps	Nov 98
Allen & Heath	*GS3000*	*£4699*	*32:8:2*	*4-band EQ, 2 sweeps, 2 valve mic/guitar pre-amps*	*Nov 98*
Allen & Heath	WZ20:8:2	£960	20:8:2	4-band EQ, 2 sweeps, 6 sends, 6 stereo returns, 28 inputs on mixdown	
Behringer	*MX8000*	*£2299*	*24:8:24:2*	*4-band EQ, 2 sweeps, 6 sends, dual input desk*	*Jan 97*
Fostex	2016	£406	8:8:2	Rackmountable, also configurable as 16:2	
Fostex	*812*	*£1209*	*12:8*	*3-band EQ, 2 sweeps, 4 aux, optional MIDI muting*	
Korg	168 SoundLink	£999	24:8:2	3-band parametric EQ, 2 sends, effects	Dec 96
Mackie	*8•bus*	*£2875*	*16:8*	*4-band EQ, 1 sweep, 6 sends, 6 stereo returns*	*Jan 97*
Mackie	8•bus	£3590	24:8	4-band EQ, 1 sweep, 6 sends, 6 stereo returns	Jan 97
Mackie	*8•bus*	*£4395*	*32:8*	*4-band EQ, 1 sweep, 6 sends, 6 stereo returns*	*Jan 97*
Sony	SRP-V110	£1174	10:8:2	4 stereo, 3-band EQ, 8 sends, rackmountable	
Sony	*SRP-V324*	*£9969*	*24:8:2*	*4 stereo, 4-band EQ, 8 sends, MIDI, 8 matrix outs*	
Soundcraft	Ghost	£3956	24:8:2	4-band EQ, 2 parametric mids, 8 sends, 4 stereo returns	Jan 97
Soundcraft	*Ghost*	*£4700*	*24:8:2*	*4-band EQ, 2 parametric mids, 8 sends, 4 stereo returns, various MIDI controls*	*Jan 97*
Soundcraft	Ghost	£4806	32:8:2	4-band EQ, 2 parametric mids, 8 sends, 4 stereo returns	Jan 97
Soundcraft	*Ghost*	*£5558*	*32:8:2*	*4-band EQ, 2 parametric mids, 8 sends, 4 stereo returns, various MIDI controls*	*Jan 97*
Soundtracs	Topaz	£3289	24:8:2	Dual EQ (1x4-band 2-sweep or 2x2-band), 6 sends, 4 stereo returns	
Soundtracs	*Topaz Project 24-8*	*£2937*	*24:8:2*	*4-band EQ, 2 sweeps, 6 sends*	*Jan 97*
Soundtracs	Topaz Project 32-8	£3877	32:8:2	4-band EQ, 2 sweeps, 6 sends	
Soundtracs	*Virtual*	*£21737*	*48:8:2*	*4-band parametric EQ, 8 sends, 8 stereo returns, compressor/gate*	*Spr 97*
Spirit By Soundcraft	328	£3523	32:8:2	3-band parametric EQ, 4 sends, 2x Lexicon effects processors, digital interfacing	Apr 98
Spirit By Soundcraft	*Spirit 8*	*£3162*	*16:8:2*	*4-band EQ, 2 sweeps, 6 sends, 6 stereo returns*, also can function as live desk	
Spirit By Soundcraft	Spirit 8	£4279	24:8:2	*4-band EQ, 2 sweeps, 6 sends, 6 stereo returns*, also can function as live desk	
Spirit By Soundcraft	*Spirit 8*	*£5395*	*32:8:2*	*4-band EQ, 2 sweeps, 6 sends, 6 stereo returns*, also can function as live desk	
Spirit By Soundcraft	Spirit 8	£6511	40:8:2	*4-band EQ, 2 sweeps, 6 sends, 6 stereo returns*, also can function as live desk	
Spirit By Soundcraft	*Studio*	*£1568*	*16:8:2*	*4-band EQ, 2 sweeps, 6 sends, 4 stereo returns*	*Jan 97*
Spirit By Soundcraft	Studio	£2123	24:8:2	4-band EQ, 2 sweeps, 6 sends, 4 stereo returns	Jan 97
Spirit By Soundcraft	*Studio*	*£2839*	*32:8:2*	*4-band EQ, 2 sweeps, 6 sends, 4 stereo returns*	*Jan 97*
Studiomaster	Mixdown Classic 8	£1526	16:8:16:2	3-band EQ, 2 sweeps, 6 sends, 1 stereo return, MIDI muting, phantom power	
Studiomaster	*Mixdown Classic 8*	*£1644*	*24:8:16:2*	*3-band EQ, 2 sweeps, 6 sends, 1 stereo return*, MIDI muting, phantom power	
Studiomaster	Mixdown Classic 8	£1879	32:8:16:2	3-band EQ, 2 sweeps, 6 sends, 1 stereo return, MIDI muting, phantom power	
Target	*HK28A*	*£2899*	*32:8:2*	*4-band EQ, 2 sweeps, 8 sends, 4 stereo returns, 4 mute groups, phantom power*	
Target	HK36A	£3654	40:8:2	*4-band EQ, 2 sweeps, 8 sends, 4 stereo returns, 4 mute groups, phantom power*	
Target	*HK44A*	*£4369*	*48:8:2*	*4-band EQ, 2 sweeps, 8 sends, 4 stereo returns, 4 mute groups, phantom power*	
Tascam	M-1600	£1399	16:8:2	3-band EQ, 1 sweep, 6 sends, 4 stereo returns, Tascam DA series interfacing	Apr 97
Tascam	*M-1600*	*£1699*	*24:8:2*	*3-band EQ, 1 sweep, 6 sends, 4 stereo returns, Tascam DA series interfacing*	*Apr 97*
Tascam	M2616	£2499	16:8:2	4-band EQ, 2 sweeps, 8 sends, 6 returns	
Tascam	*M2624*	*£3299*	*24:8:2*	*4-band EQ, 2 sweeps, 8 sends, 6 returns*	
Yamaha	02R	£7049	24:8:2	4-band parametric EQ, 2 effects, 50 dynamics processors, expandable to 44:8:2	
Yamaha	*RM800*	*£1499*	*16:8:2*	*3-band EQ, 1 sweep, 4 sends*	
Yamaha	RM800	£1899	24:8:2	3-band EQ, 1 sweep, 4 sends	

MONITORING

HEADPHONES: Closed headphones are suitable for miked recording, since the sound source is enclosed. Open phones are good for general monitoring purposes.
POWER RATINGS: Where possible, all amp ratings are quoted. Where not indicated, assume an 8Ω load.
MONITORS: All monitors are priced per pair for easy comparison. Nearfield monitors should be located close to the listener (within one or two metres). They are designed to give you an accurate representation of the sound, without being coloured by the room's acoustics. Full-range monitors can reproduce more extreme frequencies without distortion. Active monitors feature internal amplification, often with one amp per driver. This means that amp and speaker are usually better matched.

HEADPHONES

MANUFACTURER	MODEL	PRICE	TYPE	DESCRIPTION	REVIEW
AKG	K100	£60	Semi-open	20Hz–28kHz, 100Ω impedance	
AKG	*K141*	*£80*	*Semi-open*	*20Hz–20kHz, 600Ω impedance*	
AKG	K240DF	£100	Semi-open	20Hz–20kHz, 600Ω *impedance*	
AKG	*K240M*	*£90*	*Semi-open*	*15Hz–20kHz, 600Ω impedance*	
AKG	K270S	£130	Closed	20Hz–28kHz, 75Ω *impedance*	
AKG	*KROX*	*£30*	*Semi-open*	*20Hz–20kHz, 100Ω impedance*	
Audio-Technica	ATH908	£65	Open	30Ω *impedance*	
Audio-Technica	*ATM910 PRO*	*£80*	*Closed*	*30Ω impedance*	
Audio-Technica	ATH911	£120	Open	600Ω *impedance*	
Audio-Technica	*ATH-D40fs*	*£120*	*Closed*	*66Ω impedance*	
Audio-Technica	ATH-M3X	£30	Closed		
Audio-Technica	*ATH-M40fs*	*£120*	*Closed*	*LF response to 5Hz for professional monitoring/mixing, 60Ω impedance*	
Aural Envelope	DX220	£30	Closed	Beyer DT 100 'copies'	
Beyerdynamic	*DT 48*	*£234*	*Closed*	*16Hz–20kHz, available with 8Ω, 25Ω, 200Ω impedance*	
Beyerdynamic	DT 100	£128	Closed	30Hz–20kHz, available with 8Ω, 400Ω, 2000Ω impedance	
Beyerdynamic	*DT 150*	*£152*	*Closed*	*5Hz–30kHz, 250Ω impedance*	
Beyerdynamic	DT 220	£93	Closed	20Hz–20kHz, available with 20Ω, 400Ω impedance	
Beyerdynamic	*DT 250*	*£105*	*Closed*	*10Hz–30kHz, 80Ω impedance*	
Beyerdynamic	DT 250	£116	Closed	As above, but with 250Ω impedance	
Beyerdynamic	*DT 770 Pro*	*£116*	*Closed*	*5Hz–35kHz, 600Ω impedance*	
Beyerdynamic	DT 990 Pro	£140	Open	5Hz–35kHz, 600Ω impedance	
Beyerdynamic	*DT 131*	*£28*	*Open*	*30Hz–18kHz, 40Ω impedance*	
Beyerdynamic	DT 331	£46	Open	20Hz–20kHz, 40Ω impedance	
Beyerdynamic	*DT 431*	*£81*	*Open*	*15Hz–20kHz, 40Ω impedance*	
Beyerdynamic	DT 531	£105	Open	10Hz–30kHz, 250Ω impedance	
Beyerdynamic	*DT 801*	*£140*	*Closed*	*10Hz–30kHz, 250Ω impedance*	
Beyerdynamic	DT 811	£187	Open	10Hz–30kHz, 250Ω impedance	
Beyerdynamic	*DT 831*	*£140*	*Closed*	*5Hz–32kHz, 250Ω impedance*	
Beyerdymanic	DT 901	£116	Closed	5Hz–32kHz, 250Ω *impedance*	
Beyerdynamic	*DT 911*	*£116*	*Open*	*5Hz–32kHz, 250Ω impedance*	
Beyerdynamic	DT 931	£187	Open	5Hz–35kHz, 250Ω *impedance*	
Denon	*AH-D210*	*£45*	*Closed*	*5Hz–26kHz, 32Ω impedance*	
Denon	AH-D350	£65	Closed	4Hz–25kHz, 32Ω *impedance*	
Denon	*AH-D550*	*£80*	*Closed*	*3Hz–28kHz, 35Ω impedance*	
Denon	AH-D650	£95	Closed	3Hz–29kHz, 35Ω *impedance*	
Denon	*AH-D750*	*£130*	*Closed*	*2Hz–31kHz, 30Ω impedance*	
Denon	AH-D950	£150	Closed	2Hz–30kHz, 30Ω *impedance*	
Fostex	*T-5*	*£54*	*Semi-open*	*44Ω impedance*	
Fostex	T-7	£76	Semi-open	70Ω *impedance*	
Fostex	*T20RP*	*£98*	*Semi-open*	*20Hz–25kHz, 50Ω impedance*	
Fostex	T40RP	£105	Closed	25Hz–25kHz, 50Ω *impedance*	
JHS	*HP685V*	*£8*	*Closed*	*20Hz–20kHz, 8Ω impedance*	
JHS	LH036	£50	Closed	5Hz–20kHz	Jan 97
JHS	*LH115*	*£15*	*Closed*	*20Hz–20kHz, 32Ω impedance*	*Jan 97*
JHS	LH135	£30	Closed	15Hz–25kHz, 32Ω impedance	Jan 97
JHS	*LH715*	*£10*	*Closed*	*20Hz–20kHz, 32Ω impedance*	
JHS	LH945	£20	Semi-open	15Hz–20kHz, 32Ω *impedance*	
Sennheiser	*HD 25*	*£160*	*Closed*	*16Hz–22kHz, 70Ω impedance, split headband*	
Sennheiser	HD 25-13	£160	Closed	As HD 25, but with 600Ω impedance	
Sennheiser	*HD 25SP*	*£90*	*Closed*	*30Hz–16kHz, 85Ω impedance*	
Sennheiser	HD 250 II	£150	Closed	10Hz–25kHz, 300Ω impedance	
Sennheiser	*HD 250 II Linear*	*£150*	*Closed*	*As HD 250 II, but with 150Ω impedance*	
Sennheiser	HD 265 Linear	£125	Closed	10Hz–25kHz, 150Ω impedance	
Sennheiser	*HD 400 Headmax*	*£25*	*Open*	*25Hz–18kHz, 32Ω impedance*	
Sennheiser	HD 433	£20	Open	18Hz–20kHz, 32Ω impedance	
Sennheiser	*HD 455*	*£55*	*Open*	*18Hz–21kHz, 60Ω impedance*	
Sennheiser	HD 465	£65	Open	18Hz–22kHz, 60Ω impedance	
Sennheiser	*HD 470*	*£35*	*Open*	*22Hz–20kHz, 60Ω impedance*	
Sennheiser	HD 475	£80	Open	16Hz–23kHz, 60Ω impedance	
Sennheiser	*HD 545 Reference*	*£120*	*Open*	*16Hz–28kHz, 150Ω impedance*	
Sennheiser	HD 565 Ovation	£150	Open	16Hz–30kHz, 150Ω impedance	
Sennheiser	*HD 570 Symphony*	*£80*	*Open*	*18Hz–22kHz, 120Ω impedance*	
Sennheiser	HD 580 Precision	£200	Open	12Hz–38kHz, 300Ω impedance	
Sennheiser	*HD 600*	*£250*	*Open*	*12Hz–38kHz, 300Ω impedance*	
Sony	MDR-7502	£49	Open	Monitor headphones	
Sony	*MDR-7504*	*£93*	*Open*	*Professional monitor headphones*	
Sony	MDR-7506	£111	Open	Professional monitor headphones	
Yamaha	*RH-5M*	*£47*	*Closed*	*Dynamic-type professional headphones*	
Yamaha	RH-10M	£85	Semi-open	Dynamic-type professional headphones	
Yamaha	*RH-40M*	*£116*	*Closed*	*Professional monitor headphones*	

POWER AMPS

MANUFACTURER	MODEL	PRICE	POWER	DESCRIPTION	REVIEW
ATC	SPA2-150	£2500	tbc	Power amplifier	
Byston	*2B LP*	*£tbc*	*50W*	*1U, also 2x100W 4Ω, 1x200W 8Ω*	
Byston	3B ST	£tbc	120W	3U, also 2x200W 4Ω, 1x400W 8Ω	
Byston	*4B ST*	*£tbc*	*250W*	*3U, also 2x400W 4Ω, 1x800W 8Ω*	
Byston	8B ST	£tbc	400W	3U, also 2x120W, 1x400W 8Ω, 4x120W 8Ω	
C-Audio	*GB202*	*£439*	*130W*	*3U, also 2x200W 4Ω, 2x300W 2Ω, limiter*	
C-Audio	GB402	£549	260W	3U, *also 2x400W 4Ω, 2x525W 2Ω, limiter*	
C-Audio	*GB602*	*£599*	*380W*	*3U, also 2x600W 4Ω, 2x800W 2Ω, limiter*	
C-Audio	RA501	£669	125W	1U	
C-Audio	*RA1001*	*£998*	*250W*	*2U*	
C-Audio	RA2001	£1174	450W	2U	
C-Audio	*RA3001*	*£1291*	*625W*	*2U*	
C-Audio	RA4001	£1644	1000W	2U	
C-Audio	*SRX3601*	*£1761*	*400W*	*3U, also 2x650W 4Ω, 2Ω operation possible*	
C-Audio	SRX3701	£1879	490W	3U, also 2x840W 4Ω, 2Ω operation possible	
C-Audio	*SRX3801*	*£2231*	*750W*	*3U, also 2x1200W 4Ω, 2Ω operation possible*	
C-Audio	ST400i	£704	400W	2U	
C-Audio	*ST600i*	*£999*	*600W*	*2U*	
C-Audio	ST1000i	£1233	1000W	3U	
DAS	*P-600*	*£939*	*200W*	*Also 2x290 4Ω, 1x500 8Ω*	
DAS	P-900	£1103	300W	Also 2x450 4Ω, 1x800 8Ω	
DAS	*P-1400*	*£1468*	*400W*	*Also 2x690 4Ω, 1x1300 8Ω*	
DAS	P-1800	£1620	650W	Also 2x940 4Ω	
Denon	*PMA-100M*	*£235*	*80W*	*Also 2x100W 4Ω*	
Denon	PMA-250SE	£165	30W	Also 2x50W 4Ω	
Denon	*PMA-425R*	*£230*	*45W*	*Also 2x70W 4Ω*	
Denon	PMA-725R	£350	65W	Also 2x100W 4Ω	
HK Audio	*VC800*	*£929*	*165W*	*2U, also 2x270 4Ω, 2x400 2Ω, 1x550 8Ω, 1x840 4Ω, filter, limiter*	
HK Audio	VC1200	£1200	300W	2U, also 2x500 4Ω, 2x650 2Ω, 1x975 8Ω, 1x1300 4Ω, limiter	
HK Audio	*VC2400*	*£1459*	*750W*	*2U, also 2x1200 4Ω, 1x2400 8Ω*	
HK Audio	VC2402	£1459	500W	2U, also 2x750 4Ω, 2x1200 2Ω, 1x1500 8Ω, 1x2400 4Ω	
JBL	*MPA275*	*£1409*	*175W*	*2U, also 2x275 4Ω, 1x550 8Ω*	
JBL	MPA400	£1632	275W	2U, also 2x400 4Ω, 1x800 8Ω	
JBL	*MPA600*	*£1808*	*400W*	*2U, also 2x660 4Ω, 1x1320 8Ω*	
JBL	MPA750	£2396	500W	3U, also 2x800 4Ω, 1x1600 8Ω	
JBL	*MPA1100*	*£2701*	*720W*	*3U, also 2x1200 4Ω, 1x2400 8Ω*	
JBL	MPX300	£1103	200W	3U, also 2x300 4Ω, 2x450 2Ω, 1x600 8Ω, 1x900 4Ω, filter	
JBL	*MPX600*	*£1409*	*400W*	*3U, also 2x600 4Ω, 2x850 2Ω, 1x1200 8Ω, 1x1700 4Ω, filter*	
JBL	MPX1200	£2349	800W	3U, also 2x1200 4Ω, 2x1600 2Ω, 1x2400 8Ω, 1x3200 4Ω, filter	
LAB.GRUPPEN	*LAB 4000*	*£tbc*	*1300W*	*2U, 10 power ratings including 2x2100W 4Ω, 2x3200W 2Ω*	
Mackie	M1200	£tbc	225W	Also 2x400W 4Ω, 1x1200W 4Ω	
Mackie	*M1400*	*£tbc*	*250W*	Also 2x425W 4Ω, 1x1260W 4Ω	
MTR	SPA-200	£355	200W	1U, all aluminium chassis, no fan	
MTR	*SPA-400b*	*£450*	*400W*	*1U, balanced, soft start, Speakons*	
Phonic	MAR2	£405	150W	2U, also 2x230W 4Ω, 2x300W 2Ω, 1x540W 4Ω	
Phonic	*MAR4*	*£523*	*270W*	*2U, also 2x425W 4Ω, 2x550W 2Ω, 1x1100W 4Ω, switchable limiting*	
Phonic	MAR6	£693	400W	3U, also 2x650W 4Ω, 2x1000W 2Ω, 1x2000W 4Ω, switchable limiting	
Peavey	*Classic 50/50*	*£479*	*50W*	*2U, tube, also 4Ω and 16Ω operation*	
Peavey	CS 200X	£389	85W	1U, also 1x170W 8Ω	
Peavey	*CS 400X*	*£569*	*130W*	*3U, also 2x210W 4Ω, 2x300W 2Ω, 1x420W 8Ω, 1x600W, fan*	
Peavey	CS 800S	£679	240W	2U, also 2x400W 4Ω, 2x600W 2Ω, 1x800W 8Ω, 1x1200W, 2 fans	
Peavey	*CS 1800G*	*£1035*	*350W*	*2U, also 2x600W 4Ω, 2x900W 2Ω, 1x1200W 8Ω, 1x1800W 4Ω, 2 fans*	
Peavey	CS 3000G	£1629	600W	3U, also 2x1000W 4Ω, 2x1500W 2Ω, 1x2000W 8Ω, 1x3000W 4Ω, 2 fans	
Peavey	*PV 2.6C*	*£279*	*100W*	*2U, also 2x130W 4Ω*	
Peavey	PV 4C	£429	130W	3U, also 2x210W 4Ω, 2x250W 2Ω, 1x420W 8Ω, 1x500W 4Ω, fan	
Peavey	*PV 8.5C*	*£499*	*250W*	*3U, also 2x425W 4Ω, 2x600W 2Ω, 1x850W 8Ω, 1x1200W 4Ω, fan*	
Peavey	PV 2000	£679	350W	4U, also 2x650W 4Ω, 2x1000W 2Ω, 1x1300W 8Ω, 1x2000W 4Ω, fan	
QSC	*CX4*	*£664*	*150W*	*2U, also 2x225W 4 Ohm, 2x350W 2 Ohm, 2-speed fan*	
QSC	CX4T	£840	150W	2U, also 2x225W 4 Ohm, 2x350W 2 Ohm, 2-speed fan, direct and distributed outputs	
QSC	*CX6*	*£917*	*200W*	*3U, also 2x300W 4 Ohm, 2x450W 2 Ohm, 2-speed fan*	
QSC	CX6T	£1052	200W	3U, also 2x300W 4 Ohm, 2x450W 2 Ohm, 2-speed fan, direct and distributed outputs	
QSC	*CX12*	*£1293*	*400W*	*3U, also 2x600W 4 Ohm, 2x900W 2 Ohm, 2-speed fan*	
QSC	CX12T	£1492	400W	3U, also 2x600W 4 Ohm, 2x900W 2 Ohm, 2-speed fan, direct and distributed outputs	
QSC	*EX800*	*£999*	*175W*	*2U, also 2x275W 4 Ohm, 2x400W 2 Ohm, limiter*	
QSC	EX1250	£1234	275W	2U, also 2x400W 4 Ohm, 2x600W 2 Ohm, limiter	
QSC	*EX1600*	*£1469*	*400W*	*2U, also 2x600W 4 Ohm, 2x800W 2 Ohm, limiter*	
QSC	EX2500	£1951	500W	3U, also 2x750W 4 Ohm, 2x1000W 2 Ohm, limiter	
QSC	*X4000*	*£2291*	*800W*	*3U, also 2x1200W 4 Ohm, 2x1600W 2 Ohm, limiter*	
QSC	MX700	£576	170W	2U, also 2x270W 4 Ohm, 2x350W 2 Ohm, 2-speed fan	
QSC	*MX1000a*	*£981*	*275W*	*2U, also 2x400W 4 Ohm, 2x500W 2 Ohm, 2-speed fan*	
QSC	MX1500a	£1046	400W	2U, also 2x600W 4 Ohm, 2x750W 2 Ohm, 2-speed fan	
QSC	*MX2000a*	*£1387*	*475W*	*3U, also 2x725W 4 Ohm, 2x1000W 2 Ohm, 2-speed fan*	
QSC	MX3000a	£1974	825W	3U, also 2x1250W 4 Ohm, 2x1600W 2 Ohm, 2-speed fan	Dec 94
QSC	*PowerLight 1.0*	*£1351*	*200W*	*2U, also 2x325W 4 Ohm, 2x500W 2 Ohm, limiter, variable speed fan*	
QSC	PowerLight 1.4	£1610	300W	2U, also 2x500W 4 Ohm, 2x700W 2 Ohm, limiter, variable speed fan	
QSC	*PowerLight 1.8*	*£1874*	*400W*	*2U, also 2x650W 4 Ohm, 2x900W 2 Ohm, limiter, 2 variable speed fans*	
QSC	PowerLight 2.0HV	£1992	650W	2U, also 2x400W 16 Ohm, 2x1000W 4 Ohm, limiter, 2 variable speed fans	
QSC	*PowerLight 3.4*	*£2773*	*725W*	*3U, also 2x1150W 4 Ohm, 2x1700W 2 Ohm, limiter, variable speed fan*	
QSC	PowerLight 4.0	£3102	900W	3U, also 2x1400W 4 Ohm, 2x2000W 2 Ohm, limiter, variable speed fan	
QSC	*USA400*	*£582*	*125W*	*3U, also 2x200W 4 Ohm, 2x250W 2 Ohm, limiter, high-pass filter*	
QSC	USA900	£687	270W	3U, also 2x450W 4 Ohm, 2x500W 2 Ohm, limiter, high-pass filter	

MANUFACTURER	MODEL	PRICE	POWER	DESCRIPTION	REVIEW
QSC	USA1310	£1052	400W	4U, also 2x655W 4 Ohm, 2x1000W 2 Ohm, limiter, high-pass filter	
Sony	*SRP-P15*	*£523*	*150W*	*3U, bridgeable (500W), Speakons, rugged chassis*	
Sony	SRP-P26	£610	250W	3U, bridgeable (800W), Speakons, rugged chassis	
Sony	*SRP-P500*	*£2726*	*500W*	*3U, bridgeable, output meters, remote monitoring/muting*	
SoundTech	PL200	£169	55W	1U, also 2x100W 4Ω, 1x200W 8Ω	Sum 98
SoundTech	*PS802*	*£449*	*400W*	*1U, also 1x800W*	
Studiomaster	700D	£528	350W	2U, 4Ω, bridge and mono modes	Aug 96
Studiomaster	*1200D*	*£680*	*600W*	*2U, 4Ω, bridge and mono modes*	
Studiomaster	1600D	£939	800W	2U, 4Ω, bridge and mono modes	
Yamaha	*A100A*	*£289*	*50W*	*2U-high but half a 19-inch rack wide, VU meters*	
Yamaha	H3000	£1149	350W	2U, also 2x450W 4Ω, 1x900W 8Ω	
Yamaha	*H5000*	*£1499*	*550W*	*2U, also 2x700W 4Ω, 1x1400W 8Ω*	
Yamaha	H7000	£1799	750W	2U, also 2x950W 4Ω, 1x1900W 8Ω	
Yamaha	*P1600*	*£449*	*160W*	*2U, also 2x200W 4Ω, 2x350W 2Ω, 1x400W 8Ω*	
Yamaha	P3200	£599	340W	2U, also 2x440W 4Ω, 2x950W 2Ω, 1x880W 8Ω	
Yamaha	*P4500*	*£699*	*460W*	*2U, also 2x620W 4Ω, 2x1300W 2Ω, 1x1240W 8Ω*	

NEARFIELD MONITORS

MANUFACTURER	MODEL	PRICE	POWER	DESCRIPTION	REVIEW
Acoustic Energy	200 Series	£250	125W	2-way, 5-inch MF/LF unit, 1-inch tweeter, bi-wireable, magnetically shielded	Jun 98
Alesis	*Monitor One*	*£399*	*120W*	*45Hz–18kHz, 2 way, 6.5-inch woofer, 1-inch tweeter*	*Feb 97*
Alesis	Point Seven	£249	75W	2 way	Feb 97
ATC	*SCM10*	*£1000*	*tbc*	*Studio control monitors*	
ATC	SCM10 PRO	£929	tbc	Studio control monitors	
ATC	*SCM20 PRO*	*£1468*	*tbc*	*Studio control monitors*	
ATC	SCM20 SL	£1600	tbc	Studio control monitors	
ATC	*SCM20 SL TOWER*	*£2100*	*tbc*	*Studio control monitors*	
ATC	SCM20A PRO	£3049	tbc	Studio control monitors	
ATC	*SCM50 SL*	*£3751*	*tbc*	*Studio control monitors*	
ATC	SCM50A PRO	£5586	tbc	Studio control monitors	
ATC	*SCM50A SL*	*£5251*	*tbc*	*Studio control monitors*	
Audix	Nile V	£1287	250W	40Hz–20kHz, 2 way, 7-inch woofer, 1-inch tweeter	
Audix	*Studio 1A*	*£569*	*250W*	*50Hz–18kHz, 2 way, 6.5-inch woofer, 1-inch tweeter*	
Audix	Studio 3A	£849	350W	47Hz–19kHz, 2 way, dual 6.5-inch woofers, 1-inch tweeter	
Denon	*SC-E313*	*£160*	*100W*	*35Hz–30kHz, 2 way, 160mm woofer, dome tweeter, magnetically shielded*	
Denon	SC-M2	£81	70W	70Hz–20kHz, 2 way, 135mm woofer, dome tweeter	
Dynaudio	*BM5*	*£399*	*100W*	*50Hz–20kHz, 2 way, 170mm woofer, 28mm tweeter*	
Dynaudio	BM6P	£646	100W	2 way	
Dynaudio	*BM10*	*£tbc*	*tbc*	*50Hz–20kHz, 2 way, 180mm woofer, 28mm tweeter*	
Dynaudio	BM15	£799	250W	40Hz–22kHz, 2 way with 240mm woofer	
Dynaudio	*LS5/12A*	*£tbc*	*tbc*	*50Hz–20kHz, 2 way, magnetically shielded*	
Dynaudio	M1	£1810	300W	2 way, console mounted, 1000W peak handling	
Electro-Voice	*S40*	*£311*	*160W*	*2 way*	
Electro-Voice	S60	£576	100W	2 way	
Electro-Voice	*S80*	*£905*	*80W*	*2 way*	
Epos	ES12	£500	100W	2 way	Feb 97
Event	*20/20*	*£399*	*200W*	*50Hz–20kHz, 2 way, 8-inch woofer, 1-inch tweeter*	*Jan 97*
FAR	CR10	£499	110W	45Hz–23kHz, 2 way, 5-inch woofer, 1-inch tweeter	Jul 96
Fostex	*SP11 Mk2*	*£432*	*100W*	*60Hz–18kHz, 2 way, 2x10cm full-range units*	
JBL	4206	£300	300W	65Hz–20kHz, 2 way, 6.5-inch woofer, 1-inch tweeter, magnetically shielded	
JBL	*4208*	*£350*	*300W*	*60Hz–20kHz, 2 way, 8-inch woofer, 1-inch tweeter, magnetically shielded*	*Feb 97*
JBL	4408A	£632	100W	50Hz–20kHz, 2 way, 8-inch woofer, 1-inch tweeter, mirrored pairs	
JBL	*Control 1*	*£140*	*150W*	*120Hz–20kHz, 2 way, 135mm LF unit, 19mm HF unit, magnetically shielded*	
JBL	Control 1-WH	£170	150W	As Control 1, but in white	
JBL	*Control 5*	*£330*	*175W*	*75Hz–20kHz, 2 way, 6.5-inch woofer, 1-inch tweeter, magnetically shielded*	
JBL	Control 5-WH	£530	175W	As Control 5, but in white	
KRK	*E7 Exposé*	*£2697*	*140W*	*54Hz–20kHz, 2 way, 7-inch bass driver, 1-inch tweeter*	
KRK	E8 Exposé	£tbc	tbc	2 way, 8-inch bass driver, 1-inch tweeter	
KRK	*K-Rok*	*£352*	*100W*	*2 way*	
KRK	K-RokS	£463	100W	As K-Rok, but magnetically shielded	
KRK	*RoKit*	*£269*	*75W*	*2-way, 6-inch woofer, 1-inch tweeter, magnetically shielded*	
KRK	V8	£tbc	130W	2 way, 8-inch woofer, 1-inch tweeter, bi-amped	
Neat Acoustics	*Critique Mk2*	*£385*	*150W*	*2 way, 160mm bass/mid unit, 25mm tweeter*	*Oct 98*
Peavey	PRM308Si	£638	80W	3 way, time-corrected	
Phonic	*SE206*	*£88*	*50W*	*70Hz–16kHz, 2 way, 5.25-inch woofer, 1-inch tweeter*	
Phonic	SE207	£116	100W	70Hz–20kHz, 2 way, 6.5-inch woofer, 1-inch tweeter	
PMC	*TB1S*	*£430*	*150W*	*2 way, magnetically shielded*	*Feb 97*
PMC	XB1	£587	150W	Bass extender for TB1 monitors	
Quested	*H108*	*£tbc*	*tbc*	*20Hz–20kHz, 2 way, 200mm woofer, 28mm tweeter*	
Quested	H208	£tbc	tbc	20Hz–20kHz, 2 way, 2x75mm mid-range drivers, 28mm tweeter	
Richard Allen	*RA8M*	*£229*	*100W*	*BBC-spec nearfield monitors*	*Sep 94*
Rogers	LS1	£tbc	tbc	55Hz–20kHz, 2 way, 125mm bass/mid unit, 19mm tweeter	
Rogers	*LS3/5A*	*£tbc*	*tbc*	*70Hz–20kHz, 2 way, 125mm bass/mid unit, 19mm tweeter*	
Spirit By Soundcraft	Absolute 2	£272	100W	45Hz–20kHz, 2 way, 6.5-inch woofer, 1-inch tweeter, magnetically shielded	Feb 97
Spirit By Soundcraft	*Absolute Zero*	*£206*	*95W*	*55Hz–18kHz, 2 way, 6.5-inch woofer, 1-inch tweeter*	
Tannoy	Reveal	£229	50W	60Hz–20kHz, 2 way, 6.5-inch woofer, 1-inch tweeter	
Tannoy	*PBM 6.5 II*	*£329*	*50W*	*55Hz–20kHz, 2 way, 165mm woofer, 19mm tweeter*	
Tannoy	PBM 8 II	£529	80W	52Hz–20kHz, 2 way, 200mm woofer, 19mm tweeter	Feb 97
Tannoy	*System 600*	*£447*	*80W*	*52Hz–20kHz, 165mm dual concentric unit*	
Tannoy	System 800	£646	90W	47Hz–20kHz, 200mm dual concentric unit	
Westlake Audio	*Lc 6.75*	*£995*	*80W*	*<60Hz–18kHz, 2 way*	*Dec 96*
Xpression!	DPM1	£379	175W	48hz–20kHz, 2 way, 1-inch tweeter, 8-inch woofer, magnetically shielded	Jun 97

MANUFACTURER	MODEL	PRICE	POWER	DESCRIPTION	REVIEW
Xpression!	MS1	£349	175W	Sub-woofer for DPM1	Jun 97
Yamaha	*NS10M-STUD*	*£375*	*150W*	*2 way, 20Hz–20kHz, classic studio nearfield monitors*	*Feb 97*
Yamaha	S15	£218	150W	Trapezoidal bass-reflex speaker, 65Hz–40kHz, 5-inch woofer, 1-inch tweeter	
Yamaha	*S55*	*£195*	*150W*	*Trapezoidal bass-reflex speaker, 60Hz–40kHz, 6.5-inch woofer, 1-inch tweeter*	
Yamaha	YS12ME	£165	125W	2 way, 12-inch bass, HF driver and horn	
Yamaha	*YS212E*	*£159*	*125W*	*2 way, 12-inch bass, HF driver and horn*	
Yamaha	YS215E	£189	125W	2 way, 15-inch bass, HF driver and horn	
Yamaha	*YS312E*	*£249*	*125W*	*3 way, 12-inch bass, 6.5-inch mid, HF bullet*	
Yamaha	YS315E	£249	125W	3 way, 15-inch bass, 6.5-inch mid, bullet tweeter	
Yamaha	*YSSW12E*	*£249*	*125W*	*2x12-inch sub woofer, internal low-pass filter*	
Yamaha	YSSW15E	£249	125W	2x15-inch sub woofer, UK made	

MID- & FULL-RANGE MONITORS

MANUFACTURER	MODEL	PRICE	POWER	DESCRIPTION	REVIEW
Alesis	Monitor Two	£799	150W	40Hz–18kHz, 3 way, 10-inch woofer, 5-inch mid-range driver, 1-inch tweeter	
Genelec	*1033A*	*£16212*	*tbc*	*tbc*	
Genelec	1034A	£24200	tbc	tbc	
Genelec	*1035B*	*£38340*	*tbc*	*tbc*	
Genelec	1037B	£4714	tbc	3-way main monitors	
Genelec	*1038A*	*£6892*	*tbc*	*3-way main monitors*	
Genelec	1039A	£14186	tbc	3-way main monitors	
JBL	*4410A*	*£900*	*125W*	*45Hz–20kHz, 3 way, 10-inch woofer, 5-inch mid-range, 1-inch tweeter*	
JBL	4412A	£1000	150W	45Hz–20kHz, 3 way, 12-inch woofer, 5-inch mid-range, 1-inch tweeter	
JBL	*4425*	*£1700*	*200W*	*40Hz–16kHz, 3 way, 12-inch woofer, 1-inch driver, 100°x100° bi-radial horn*	
JBL	4430	£4000	300W	35Hz–16kHz, 3 way, 15-inch woofer, 1-inch driver, 100°x100° bi-radial horn	
JBL	*Control 8SR*	*£570*	*200W*	*2-way, 8-inch woofer, compression driver with 80°x100° horn*	
JBL	DMS1 Digital	£14000	75W	30Hz–20kHz, 2 way, 2x14-inch LF units, 1x1.5-inch HF horn, plus digital controller	
JBL	*LSR32LR*	*£1900*	*200W*	*40Hz–22kHz, 3 way, 12-inch woofer, 2-inch mid-range, 1-inch diaphragm*	
PMC	AB1	£3936	300W	2 way studio monitors with bass reflex port	
PMC	*LB1*	*£1998*	*200W*	*2 way studio monitors with bass reflex port*	
Tannoy	System 1000	£1175	100W	45Hz–20kHz, 250mm dual concentric unit	
Tannoy	*System 1200*	*£1645*	*180W*	*40Hz–20kHz, 310mm dual concentric unit*	
Tannoy	System 15 DMT II	£3349	200W	38Hz–25kHz, 380mm dual concentric unit	
Tannoy	*System 215 DMT II*	*£6345*	*250W*	*35Hz–25kHz, 380mm dual concentric unit, 380mm woofer*	
Wilmslow	ATC K100	£1951	500W	High-end studio monitors in kit form	

ACTIVE MONITORS

MANUFACTURER	MODEL	PRICE	POWER	DESCRIPTION	REVIEW
Audix	PH3-s	£239	20W	100Hz–20kHz, 2 way, 3.5-inch woofer, 0.75-inch tweeter	
Audix	*PH5-vs*	*£289*	*25W*	*75Hz–20kHz, 2 way, 5.25-inch woofer, 0.75-inch tweeter*	
Audix	PH15-vs	£439	45W	50Hz–20kHz, 2 way, 5.25-inch woofer, 0.75-inch tweeter	
Audix	*PH25-vs*	*£569*	*50W*	*50Hz–20kHz, 2 way, dual 5.25-inch woofers, 0.75-inch tweeter*	
Dynaudio	BM6A	£1386	150W	2 way	Jul 97
Dynaudio	*BM15A*	*£1650*	*150W*	*2 way, 2 x 150W amplifiers (150W per driver)*	
Fostex	6301B	£378	10W	80Hz–13kHz, 1 way, 1x10cm full-range unit, magnetically shielded, jack inputs	
Fostex	*6301BW*	*£378*	*10W*	*As 6301B, but in white*	
Fostex	6301BX	£464	10W	*As 6301B, but jack and XLR inputs*	
Fostex	*SPA11*	*£724*	*100W*	*60Hz–18kHz, 2 way, 2x10cm full-range units, EQ*	
Fostex	SPA12	£856	100W	70Hz–18kHz, 2 way, 2x11cm full-range units, EQ, limiter	
Genelec	*1029A*	*£642*	*40W*	*70Hz–18kHz, 2 way, 130mm bass driver, 19mm tweeter, 2 x 40W amplifiers*	*Jul 98*
Genelec	1030A	£1320	150W	2 way	Jul 97
Genelec	*1031A*	*£1956*	*tbc*	*tbc*	
Genelec	1032A	£2472	tbc	tbc	
Genelec	*1091A*	*£458*	*70W*	*1 way subwoofer system for 1029A, 38Hz–85kHz, 210mm driver, 2 x 40W amps*	*Jul 98*
Genelec	1092A	£1102	tbc	Subwoofer system	
Genelec	*1094A*	*£1850*	*tbc*	*Subwoofer system*	
Genelec	S30C	£2890	tbc	Vertical and horizontal versions available	
Goodmans	*Active 70*	*£35*	*5W*	*1 way, 3-inch full-range speaker unit*	
JBL	6208	£900	50W	60Hz–20kHz, 2 way, 8-inch LF unit, 1-inch tweeter, bi-amped	Sep 97
JBL	*Control 1-AT*	*£400*	*60W*	*120Hz–20kHz, 2 way, 135mm LF unit, 19mm HF unit, magnetically shielded*	
JBL	Control 8SR/100	£430	200W	2-way, 8-inch woofer, compression driver with 80°x100° horn	
JBL	*LSR12P*	*£1900*	*250W*	*25Hz–110Hz, 1 way, 12-inch woofer*	
JBL	LSR28P	£1900	70W	37Hz–22kHz, 2 way, 8-inch woofer, 1-inch diaphragm, 1x200W LF, 1x70W HF	
Mackie	*HR824*	*£tbc*	*100W*	*2 way*	
Phonic	Versatap 30	£88	30W	120Hz–20kHz, 2 way, 4-inch woofer, 1-inch tweeter	
Phonic	*Versatap 50*	*£174*	*50W*	*75Hz–20kHz, 2 way, 6.5-inch woofer, 1-inch tweeter*	
Quested	VS1112	£1598 each	400W	1 way, 300mm bass driver, sub-bass unit	Apr 98
Quested	*VS2108*	*£2304*	*210W*	*2 way, 200mm bass driver, 28mm tweeter, bi-amped*	*Apr 98*
Quested	VS2205	£1716	150W	75Hz–19kHz, 2 way, dual 120mm woofers, 28mm tweeters, bi-amped	Jul 97
Sony	*SMS-1P*	*£195*	*15W*	*80Hz–16kHz, 1 way, 10cm full-range bass reflex unit, magnetic shielding, EQ*	*Sep 98*
Spendor	QT100	£704	100W	2 way	Oct 97
Spendor	*SA200*	*£1404*	*125W*	*2 way*	*Jul 97*
Spendor	SA300	£tbc	tbc	2 way	
Spirit By Soundcraft	*Absolute 4P*	*£799*	*100W*	*40Hz–20kHz, 2 way, 170mm bass driver, 25mm tweeter, bi-amped*	*Jul 97*
Tannoy	AMS 8	£2703	90W	38Hz–20kHz, 200mm dual concentric unit, bi-amped	Jul 97
Tannoy	*System 600A*	*£848*	*70W*	*44Hz–20kHz, 165mm dual concentric unit, bi-amped*	
Xpression!	DPM1 Proactive	£849	75W	46Hz–20kHz, 2 way, 2 x 75W amplifiers, 8-inch woofer, 1-inch tweeter	Mar 98
Yamaha	*MS101MK2*	*£tbc*	*10W*	*Magnetically shielded*	
Yamaha	MS202MK2	£tbc	20W	Magnetically shielded	
Yamaha	*MS20S*	*£tbc*	*20W*	*Magnetically shielded, active servo technology*	
Yamaha	YST-MSW10	£tbc	25W	Sub-bass speaker	
Zobel	*Active One*	*£1380*	*100W*	*2 way, dual woofers*	*Jul 97*

SIGNAL PROCESSORS

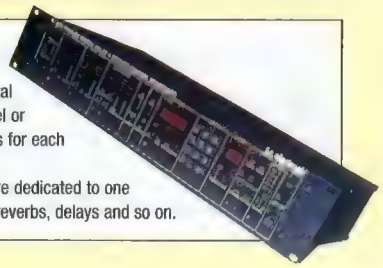
This section covers all aspects of signal processing. Entries have been categorised under their primary purpose. For instance, unless a limiter is specifically a limiter, it is likely to be listed under compressors. The same is true of expanders and noise gates.

ENHANCERS: This category includes 'exciters' and other trademarked psycho-acoustic enhancing brands.

EQs: Both graphic and parametric equalisers are covered in this category, as well as more specialist devices like feedback preventers, filters and vocoders.

MULTI-EFFECTS: This category is for effects processors that have more than one function i.e. they have reverb, delay or other effects algorithms in one unit. Some multi-effects processors allow several effects to be used at once, either in parallel or series, and may also offer discrete ins/outs for each effect.

DEDICATED EFFECTS: Effects units that are dedicated to one effect are found in their own section, e.g. reverbs, delays and so on.



COMPRESSORS

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Alesis	3630	£275	Compressor/limiter/gate	
Alesis	*NanoCompressor*	*£149*	*Stereo compressor/limiter in tiny package*	*Jul 97*
Altec Lansing	1712A	£692	Single-channel compressor/limiter	
Aphex	*106 Easyrider*	*£399*	*Budget 4-channel automatic compressor*	*Sep 94*
Aphex	108 Easyrider	£239	Budget 2-channel automatic compressor	Sep 96
Aphex	*Compellor*	*£1817*	*Compressor/limiter/leveller*	
Aphex	Expressor	£640	Rackmount compressor	
ART	*Levelar*	*£155*	*Comressor/limiter*	*Feb 97*
ARX	Afterburner	£582	Split-frequency, enhanced compressor/limiter	
ARX	*DDP1*	*£658*	*Dual-channel gate/compressor/limiter*	
ARX	QuadComp	£670	4-channel compressor/limiter	
Behringer	*MDX1000*	*£199*	*Automatic compressor/limiter*	*Dec 94*
Behringer	MDX2100	£299	Automatic compressor/expander/limiter	
Behringer	*MDX2400*	*£299*	*Automatic quad compressor/limiter*	
Behringer	MDX4000	£499	Multi-band compressor/limiter/leveller	
Behringer	*MDX8000*	*£2199*	*Multi-band compressor/limiter/leveller*	
BSS	DPR 402	£934	Stereo dynamics processor	
BSS	*DPR 944*	*£582*	*2 compressors and 2 noise gates, all with independent inputs and outputs*	
dbx	160A	£504	Mono compressor/limiter	
dbx	*163X*	*£186*	*Mono compressor/limiter*	
dbx	165A	£426	Studio-quality mono compressor/limiter	
dbx	*166*	*£549*	*Dual compressor/limiter*	
dbx	168A	£1426	Studio dynamics processor	
dbx	*262*	*£233*	*Compressor/limiter/expander*	
dbx	266	£351	Dual compressor/gate	
dbx	*903*	*£323*	*Soft-knee compressor module*	
dbx	1066	£528	Compressor/limiter/gate	
dbx	*DPP*	*£tbc*	*New Digital Dynamics Processor with processing retained in the digital domain*	
dbx	MC6	£100	Mini compressor	May 98
DigiTech	*VCS-1*	*£799*	*Dual vacuum tube compressor/noise gate/de-esser/limiter*	*Nov 97*
Drawmer	1960	£1170	Valve compressor/limiter	
Drawmer	*DL241*	*£441*	*Auto compressor*	
Drawmer	DL241X	£500	Auto compressor with balanced XLRs	
Drawmer	*DL251*	*£560*	*Spectral compressor*	
Drawmer	DL441X	£500	Auto compressor/limiter with balanced XLRs	
Drawmer	*M500*	*£911*	*Digitally controlled dynamics processor*	
Drawmer	MX30	£229	Dual gate/compressor/limiter	Aug 97
Focusrite	*Green 4*	*£1056*	*Dual compressor/limiter*	*May 97*
Focusrite	Green 6	£998	Quad compressor/limiter	Sep 98
Focusrite	*Red 3*	*£2579*	*Dual compressor/limiter*	
Joemeek	SC2	£tbc	Award-winning compressor with VU meter	
Joemeek	*VC2*	*£tbc*	*'Tube' channel compressor*	
Joemeek	VC6	£349	Compressor/pre-amp/enhancer	Dec 97
Klark Teknik	*DN500*	*£939*	*Dual compressor/limiter/expander*	
Klark Teknik	DN504	£980	Quad compressor/limiter	
LA Audio	*4x4*	*£464*	*Dual compressor/gate/variable filter*	*Mar 97*
LA Audio	C	£399	Quad compressor/limiter/de-esser/filters	
LA Audio	*C-2021*	*£706*	*Dual valve compressor*	*Nov 96*
LA Audio	Classic	£925	High-quality compressor/limiter	
LA Audio	*CV*	*£699*	*8-channel compressor*	
LA Audio	CX2	£249	Dual compressor/limiter	
LA Audio	*GCX2*	*£189*	*Dual compressor/gate*	*Apr 97*
Peavey	CDS-2	£183	Compressor/limiter/de-esser	
Phonic	*PCL3200*	*£200*	*Compressor/limiter/gate*	
Presonus	ACP-8	£595	8-channel analogue-controlled dynamics processor	Feb 97
Presonus	*Blue Max*	*£189*	*Mono/stereo compressor/limiter/pre-amp with presets*	*Sep 97*
Presonus	DCP-8	£749	8-channel fully programmable dynamics processor	Feb 97
PrismSound	*MLA-2*	*£tbc*	*Stereo/2-channel analogue compressor*	
Rane	DC-24	£635	Stereo compressor/limiter/gate with built-in crossover	
Rane	*SC-22*	*£452*	*Dual compressor/limiter with full control/metering*	
Smart Research	C2	£tbc	Dual/stereo compressor with 'crush' mode	
Sony	*SRP-L200*	*£170*	*Compressor/limiter/expander, advanced harmonics function*	
SPL	DynaMaxx	£469	Dual auto-compressor, noise gate, de-compressor, soft limiter	Sum 98
SPL	*Transient Designer*	*£821*	*Transient dynamics processor*	*Sep 98*
Symetrix	421	£529	Automatic gain controller	
Symetrix	*25*	*£399*	*Stereo/dual mono compressor/limiter/expander*	
Symetrix	488	£585	8-way compressor for multitrack use	
Symetrix	*501*	*£329*	*Single-channel peak/RMS compressor/limiter*	
Symetrix	501/01	£379	501 with input transformer	

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Symetrix	602	£2110	Stereo digital dynamics processor, MIDI, digital I/O	
Symetrix	*SX208*	*£288*	*Stereo compressor/limiter*	
tc electronic	M5000	£2957	Digital audio mainframe processor: 2 digital/2 analogue I/Os, expandable system	
TL Audio	*3021*	*£351*	*2-channel compressor*	
TL Audio	C1	£1170	Stereo valve compressor	
TL Audio	*C-5021*	*£469*	*Stereo valve compressor*	*Oct 98*
TL Audio	Indigo 2021	£704	2-channel valve compressor	Jun 96
TL Audio	*Indigo 2051*	*£704*	*Mono valve voice processor*	*Jun 96*
UFEX	Comp	£247	Dual stereo compressor	
Vestax	*L-201*	*£449*	*Dual compressor/limiter*	

DELAYS

MANUFACTURER	MODEL	PRICE	EFFECTS	DESCRIPTION	REVIEW
Klark Teknik	DN7103	£1375	tbc	1-in, 3-out digital delay with parametric EQ and limiter	
Klark Teknik	*DN7204*	*£1839*	*tbc*	*2-in, 4-out digital delay with parametric EQ and limiter*	
Korg	DL8000R	£469	tbc	Digital multi-tap delay	Dec 97
Roland	*SDE-330*	*£856*	*19*	*High-quality delays using the RSS system for 3D sound*	
tc electronic	2290-22D4	£1886	tbc	Digital delay/sampler/effects processor, expandable	
Yamaha	*D1030*	*£1369*	*tbc*	*18-bit DA, 1 in, 3 out digital delay line/crossover*	
Yamaha	D5000	£1279	12	Professional digital delay for live or studio use with 20-bit processing	

ENHANCERS

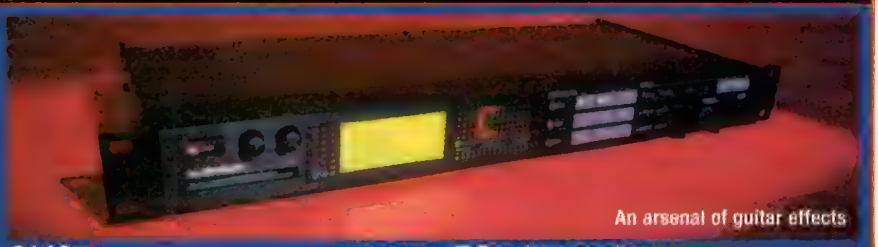
MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Aardvark	Aardscape	£675	Analogue tape saturation processor	Spr 97
Aphex	*104 Aural Exciter C2*	*£239*	*Budget exciter with 'Big Bottom' sub-harmonic synthesis*	
Aphex	Aural Exciter III	£1143	Studio-quality exciter with full spec	
BBE	*DI-100*	*£120*	*DI box with Sonic Maximizer*	*May 97*
Behringer	EX1	£249	Virtual stereo image processor with phase correlation meter	
Behringer	*EX1000j*	*£249*	*Sub-harmonic synth ('boom box') with limiter*	
Behringer	EX2100j	£149	Dual processor sound enhancer (with jacks)	
Behringer	*EX3100j*	*£249*	*Multi-band enhancer with bass and surround processor*	
Behringer	EX4000	£249	Multi-band studio enhancer	
dbx	*120XP*	*£300*	*Sub-harmonic synthesizer ('boom box')*	*Feb 97*
dbx	296	£417	Spectral enhancer	
Digilab	*GSE-3D*	*£116*	*Expressor*	
PPM	Francinstein	£586	Unusual stereo image enhancer/exciter/EQ	
SPL	*Charisma*	*£1174*	*8-channel 'tube' processor designed to simulate tape saturation*	*Dec 96*
SPL	Charisma	£586	Dual-channel 'tube' processor	Jun 98
SPL	*Classic Vitalizer*	*£tbc*	*Spectral enhancer*	
SPL	Machine Head	£2349	Digital tape saturation processor	
SPL	*Stereo Vitalizer*	*£586*	*Jack-fitted stereo spectral enhancer*	
SPL	Tube Vitalizer	£2349	Stereo enhancer with valves	Feb 98
tc electronic	*Finalizer*	*£1750*	*Digital, programmable mastering processor*	*Jan 97*
TL Audio	2031	£469	2-channel valve overdrive	Jan 98

EQs

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Altec Lansing	1431A	£504	1/3-octave, 31-band graphic EQ	
Altec Lansing	*1432A*	*£809*	*Dual 1/3-octave, 31-band graphic EQ*	
Altec Lansing	1905A	£1745	5-band parametric EQ	
Amek	*System 9098 EQ*	*£1350*	*Neve-designed EQ with built-in mic amp*	
Aphex	109 Parametric EQ	£399	4-band parametric EQ with 'Tubessence' valve technology	
Aphex	*Dominator*	*£2019*	*3-band peak processor*	
ART	Tube EQ	£199	Single-channel parametric valve EQ	Sep 98
ARX	*EQ15*	*£698*	*Dual 2/3-octave constant Q graphic EQ*	
ARX	EQ30	£634	Single 1/3-octave constant Q graphic EQ	
ARX	*EQ60*	*£993*	*Dual 1/3-octave constant Q graphic EQ*	
ARX	MultiQ	£656	6-band, fully sweepable parametric EQ	
Behringer	*DE2000*	*£250*	*Multi-band de-esser/feedback killer*	
Behringer	DSP8000	£649	Dual EQ/limiter/feedback killer	
Behringer	*PEQ305*	*£246*	*5-band parametric EQ*	
BSS	DPR501 MkII	£934	4-band mono parametric EQ	

IN FOCUS: TC Electronic G-Force

Price: £1,299
Reviewed: February 1998
Well known for their quality effects processors, TC aimed to provide a battery of guitar-specific effects with the G-Force. With its comprehensive editing, superb sound quality and digital I/O, G-Force has found a home in many studio racks. While it does have overdrive effects in its presets, it's unlikely to displace a miked-up cab for distorted sounds, but it's the reverb, delay, chorus and filter effects that sell this box.


An arsenal of guitar effects

Brief Spec
- 255 presets
- 100 memories
- True stereo operation
- MIDI controllable
- S/PDIF digital interface

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
BSS	*FCS916*	*£640*	*Parametric EQ*	
BSS	FCS930	£687	Mono/dual 30-band graphic EQ	
BSS	*FCS960*	*£1087*	*Dual stereo EQ*	
C-Audio	EQ152	£798	Stereo 15-band EQ	
C-Audio	*EQ311*	*£704*	*Mono 31-band EQ*	
C-Audio	EQ312	£986	Stereo 31-band EQ	
DACS	*FwS ColOSCil 2*	*£470*	*Ring modulator*	*Nov 98*
dbx	242	£339	Parametric EQ	
dbx	*263X*	*£186*	*Mono de-esser*	
dbx	902	£323	De-esser module	
dbx	*905*	*£548*	*3-band parametric EQ*	
dbx	1531	£460	2x15 or 1x31 graphic EQ	
dbx	*3015*	*£763*	*Dual 15-channel graphic EQ*	
dbx	3031	£763	Single 31-channel graphic EQ	
dbx	*3231*	*£1174*	*Dual 31-channel graphic EQ*	
DigiTech	Talker	£249	Vocoder with 6 types of program	
Drawmer	*MX50*	*£245*	*Dual vocal de-esser*	*Jun 98*
Drawmer	1961	£1170	Valve EQ	
FAT	*PCP330 Procoder*	*£299*	*11-band vocoder*	*Nov 97*
Focusrite	Green Two	£939	EQ with mic pre-amp, line inputs	May 97
Focusrite	*Red2*	*£2345*	*Stereo EQ*	
Joemeek	VC5 Meequalizer	£349	Dual channel EQ	Sum 98
Klark Teknik	*DN300*	*£939*	*Single channel 30-band 1/3 octave graphic EQ*	
Klark Teknik	DN301	£939	Single channel 30-band graphic EQ, attenuation only	
Klark Teknik	*DN332*	*£892*	*Dual channel 16-band 2/3 octave graphic EQ*	
Klark Teknik	DN360	£1479	Dual channel 30-band 1/3 octave graphic EQ	
Klark Teknik	*DN320*	*£646*	*Dual channel 16-band preset EQ*	
Klark Teknik	DN330	£646	Single channel 30-band preset EQ	
Klark Teknik	*DN405*	*£727*	*Single channel 5 filter parametric EQ*	
Klark Teknik	DN410	£1174	Dual channel 5 filter parametric EQ	
Klark Teknik	*DN3600c*	*£2462*	*Programmable dual channel 30-band graphic EQ*	
Klark Teknik	DN3601	£1821	Slave unit for DN3600C	
Klark Teknik	*DN4000*	*£2879*	*Dual channel 5-band parametric EQ with delay*	
Klark Teknik	DN6000	£3214	Real-time 1/3 and 1/6 octave audio analyser	
Klark Teknik	*DN8000*	*£2344*	*Loudspeaker processor*	
LA Audio	V8	£817	8-channel valve signal conditioner	Jun 96
MTR	*GE-1515*	*£240*	*Dual 15-band graphic, 1U, balanced, XLRs*	
Mutronics	Mutator	£740	MIDI-controlled stereo analogue filterbank and envelope generator	Apr 97
Nightpro	*EQ-3D*	*£1056*	*Dual-channel 6-band EQ*	*Aug 97*
Peavey	EQ 31FX	£335	tbc	
Peavey	*EQ 215FX*	*£350*	*tbc*	
Peavey	Q215	£219	15-band stereo graphic EQ	
Peavey	*Q231*	*£320*	*tbc*	
Peavey	Q431F	£280	31-band mono graphic EQ with LED feedback indicators	
Peavey	*Q431FM*	*£300*	*tbc*	
Peavey	Spectrum Analog Filter	£359	Analogue filter unit for fattening sounds	
Phonic	*PEQ3300*	*£165*	*31-band mono graphic EQ*	
Phonic	PEQ3400	£179	15-band stereo graphic EQ	
Phonic	*PEQ3600*	*£259*	*31-band stereo graphic EQ*	
PrismSound	MEA-2	£2000	Stereo/2-channel 4-band precision EQ with switchable Q and frequency	Mar 98
Rane	*FME-15*	*£383*	*2/3-octave, 15-band micrographic module*	
Rane	FPE-13	£383	3-band parametric EQ modular Flex module	
Rane	*GE14*	*£602*	*Dual 2/3-octave, 14-band constant-Q filter graphic EQ with switchable boost/cut*	
Rane	GE27	£583	Dual 1/3-octave, 27-band constant-Q filter graphic EQ with switchable boost/cut	
Rane	*GE30*	*£799*	*Single 1/3-octave, 30-band constant-Q filter graphic EQ with 60mm faders*	
Rane	GE60	£969	Dual 1/3-octave, 30-band constant-Q filter graphic EQ with accurate calibration	
Rane	*GQ30*	*£651*	*1/3-octave, 30-band constant-Q filter graphic EQ*	
Rane	ME15	£435	Dual 2/3-octave, 15-band graphic EQ with switchable boost/cut	

IN FOCUS: Xpression! DPM1

Price: £379
Reviewed: June 1997
Harbeth Acoustics' foray into the project studio monitor market was a resounding success, with both the unpowered and powered versions of the DPM1 drawing critical acclaim. Alan Branch reviewed the passive version and its optional sub-woofer in June last year, and this is what he said about them: "Using them for both recording and mixing, I also listened to various mixes that I know well, and was impressed by the uncoloured nature of the sound. The stereo imaging seemed exceptional, with good detail at the top end."

Brief Spec
- Frequency response: 48Hz-20kHz
- Power handling: 120W
- Impedance: 8ohms
- Dimensions: 420mm (h) x 255 (w) x 285 (d)

The actively-controlled DPM1

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Rane	ME15B	£464	Balanced version of ME15	
Rane	*ME30*	*£427*	*1/3-octave, 30-band graphic EQ with switchable boost/cut*	
Rane	ME30B	£452	Balanced version of ME30	
Rane	*ME60*	*£764*	*Dual 1/3-octave, 30-band graphic EQ with sweepable HPF/LPF*	
Rane	MPE 14	£879	Dual programmable 2/3-octave, 14-band constant-Q filter graphic EQ	
Rane	*NEQ228B*	*£1169*	*28-band programmable stereo EQ, up to 16 presets*	
Rane	PE15	£423	5-band parametric EQ with balanced connectors	
Rane	*PE17*	*£552*	*5-band parametric EQ with balanced connectors and 20Hz-20kHz range*	
Roland	AP-700	£1599	Multi-EQ feedback processor	
Sabine	*BX Solo*	*£335*	*Single-channel line feedback killer*	
Sabine	FBX Solo	£387	Single-channel line feedback killer with mic inputs	
Samson	*E30*	*£219*	*Dual 15-band graphic EQ*	
Samson	E62	£299	1/3-octave, dual 31-band graphic EQ	
Samson	*PF6*	*£349*	*6-channel, 4-band parametric EQ*	
Sherman	Filterbank	£449	Filter module	May 97
Sony	*SRP-E100*	*£292*	*1 channel, 31-band EQ, LC filter*	
Sony	SRP-E200	£482	2 channels, 31-band EQ, LC filter	
Sony	*SRP-F600*	*£3078*	*Feedback reduction, 31-band graphic, limiter, delay, digital I/O*	
Sony	SRP-F700	£3790	96kHz sampling, loudspeaker processor, 121-band graphic	
SoundTech	*Q150*	*£129*	*15-band stereo graphic EQ*	
SoundTech	Q310	£129	31-band mono graphic EQ with HPF	
SPL	*Optimizer*	*£939*	*4-band parametric EQ*	
Symetrix	552E	£699	Dual 5-band parametric EQ	
Symetrix	*SX201*	*£270*	*3-band parametric EQ with pre-amp*	
tc electronic	1128	£1965	Programmable graphic EQ and room analyser	
tc electronic	*1140HS*	*£522*	*4-band mono parametric EQ/pre-amp*	
tc electronic	2240HS	£884	4-band stereo parametric EQ/pre-amp	
TL Audio	*3011*	*£351*	*2-channel 4-band EQ*	*Mar 97*
TL Audio	3012	£351	2-channel parametric EQ	Mar 97
TL Audio	*3013*	*£821*	*2-channel valve parametric EQ*	*Apr 98*
TL Audio	EQ1	£822	2-channel valve EQ with mic pre-amps	Jan 95
TL Audio	*EQ2*	*£1522*	*2-channel parametric valve EQ with mic pre-amps*	*Jan 95*
TL Audio	Indigo 2011	£704	2-channel, 4-band valve EQ	Jun 96
TL Audio	*Indigo 2012*	*£704*	*2-channel, parametric valve EQ*	*Nov 96*
TL Audio	N1	£1875	Dual shelve/peak Neve EQ, repackaged in 19-inch rack	
Vestax	*GE-30*	*£350*	*Dual 15-band graphic EQ*	
Vestax	GE-31	£350	31-band graphic EQ	
Vestax	*GE-33S*	*£499*	*Stereo 30-band graphic EQ*	
Vestax	GE-62	£550	Dual 31-band graphic EQ	
Waldorf	*Miniworks 4-pole*	*£269*	*Filter module*	
Yamaha	DEQ5	£2399	19-bit AD, 20-bit DA, studio-quality fully digital EQ system in 2U box	
Yamaha	*DEQ5E*	*£1849*	*Slave unit for DEQ5*	
Yamaha	GQ1031C	£319	Mono 31-band graphic EQ	
Yamaha	*GQ2031B*	*£589*	*Stereo 31-band graphic EQ*	
Yamaha	GQ2015A	£319	Stereo 15-band graphic EQ	
Yamaha	*Q1131*	*£879*	*Professional-quality mono 31-band graphic EQ*	
Yamaha	Q2031A	£589	Stereo 31-band graphic EQ	
Yamaha	*YDG2030*	*£1199*	*Professional digital graphic EQ with 20-bit AD/DA*	
Yamaha	YDP2006	£1199	Professional digital parametric EQ with 20-bit AD/DA	
Z-Sys	*z-q1*	*£2932*	*Stereo digital parametric EQ*	*Mar 97*

EXPANDERS

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Aphex	622	£1039	Pro-quality stereo expander/gate	
Behringer	*XR1400*	*£299*	*Quad semi-automatic expander/gate*	
Behringer	XR2000	£299	Automatic class-A expander/gate	
Behringer	*XR2400*	*£399*	*Automatic quad expander/gate*	
dbx	274	£539	Quad expander/gate	
Drawmer	*DL231*	*£560*	*Dual expander*	
Drawmer	DS301	£617	Dual expander/noise gate	
Drawmer	*LX20*	*£229*	*Expander/compressor*	
Symetrix	564	£1058	Quad expander/gate	

LIMITERS

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Behringer	1800	£299	8-channel recording limiter for ADAT/DA-88	
Digilab	*GSL-4M*	*£212*	*Quad limiter*	

MULTI-EFFECT PROCESSORS

MANUFACTURER	MODEL	PRICE	EFFECTS	DESCRIPTION	REVIEW
Alesis	MicroVerb 4	£229	3	100 presets, 2 adjustable parameters, 100 memories	Mar 95
Alesis	*MidiVerb 4*	*£329*	*20*	*4 simultaneous effects*	*Mar 95*
Alesis	Q2	£699	44	Alesis' top-of-the-line effects processor	
ART	*DRX-2100SE*	*£639*	*60*	*10 simultaneous effects*	
ART	Effects Network	£299	7	Quality studio incarnation of ART's stage effects	
ART	*Extreme*	*£225*	*8*	*Rock-guitarist geared processor with 2 simultaneous effects*	
ART	FX-1	£159		30 presets, dual processing, true stereo	Jan 97
ART	*FXR*	*£200*	*16*	*255 presets, can be used as 2 separate mono effects, but no memories*	
ART	FXR Elite	£299	16	FXR with more programming and MIDI control	Oct 94
ART	*MDC-2001*	*£499*	*5*	*Features 5 combinable effects*	
ART	MR-1	£169	16	Pocket-sized budget preset effects module	
ART	*Multiverb Alpha SE*	*£399*	*60*	*Good mid-range unit with 7 simultaneous effects*	

MANUFACTURER	MODEL	PRICE	EFFECTS	DESCRIPTION	REVIEW
ART	Quadra/Fx	£299	12	4 channel stereo effects processor, with 24-bit processing and MIDI control	Oct 98
ART	*SGX 2000*	*£799*	*70*	*Same as the Nightbass, but aimed at guitarists*	
ART	SGX Nightbass SE	£799	70	Quality bass effects and amp sims with 20 simultaneous effects	
ART	*SGX Nitro*	*£629*	*70*	*1U guitar effects processor with 12 simultaneous effects*	
Behringer	Virtualizer DSP1000	£144	7	20-bit A/D and D/A converters, MIDI-controllable and dual mono operation	
Boss	*SX-700*	*£469*	*30*	*128 presets, 128 memories, MIDI control*	*Jul 96*
Boss	VT-1	£399	3	Vocal transformer	Jan 98
DigiTech	*DHP-33*	*£699*	*5*	*Combined three-part harmony generator and effects processor*	
DigiTech	GSP-2101	£999	21	Tube pre-amp with similar effects to the TSR-12	
DigiTech	*MIDI Vocalist*	*£449*	*5*	*As Vocalist II, but without song memories*	
DigiTech	RPM1	£549	1	Valve-based rotary-speaker simulator	
DigiTech	*S100*	*£180*	*22*	*Stereo inputs, 100 presets, 100 memories, MIDI In*	*Jun 98*
DigiTech	Studio 400	£800	23	Beefed-up version of the Studio Quad with similarly high-quality effects	Jan 97
DigiTech	*Studio Quad*	*£400*	*22*	*Independent dual mono/stereo parallel effects processor*	*Nov 98*
DigiTech	Studio Twin	£230	12	99 presets, 3 adjustable parameters, 99 memories, parametric EQ, MIDI control	
DigiTech	*Studio Vocalist*	*£999*	*5*	*Improved harmony processor, can provide instant voice sex changes*	
DigiTech	TSR-12	£399	55	Similar to the TSR-24, but lacks some of the more powerful features	Feb 95
DigiTech	*TSR-24S*	*£799*	*55*	*24-bit effects processor with user-definable effects chains*	
DigiTech	TSR-6	£299	22	Cut-down version of the TSR-12	
DigiTech	*Vocalist II*	*£549*	*5*	*Creates harmonies of up to five parts and stores up to 50 song lists*	*Jan 95*
DigiTech	Vocalist Workstation	£750	6	Four-part harmonies created on the fly or via MIDI control	
DigiTech	*VOFX*	*£249*	*9*	*Vocal multi-effects processor. You want Daleks? You got Daleks*	
DOD	512	£180	6	Multi-effects processor working in true stereo or dual mono	
Ensoniq	*DP/2*	*£799*	*61*	*Stereo and dual mono effects unit*	
Ensoniq	DP/4+	£1299	21	Extremely powerful unit which can act as four separate units or combine effects	
Ensoniq	*DP Pro*	*£999*	*39*	*128 presets, 256 memories, true stereo in/out, dual effects processor*	*Aug 97*
Eventide	DSP4000	£4694		The ultimate in high-end effects processors, the proverbial 'clever box'	
Hughes & Kettner	*Tube RotoSphere*	*£249*	*4*	*Valve-driven Leslie simulator, for the studio or stage*	
Ibanez	VA3	£299	8	Amp simulator and effector floor unit	
Kawai	*RV4*	*£849*	*4*	*Aimed to be a rival to the QuadraVerb, this is a simple but good sounding delay unit*	
Korg	AM8000R	£468	40	128 presets, 128 memories, with real-time control and MIDI	Feb 98
Korg	*G5*	*£299*	*1*	*Turns bass players into Bootsy with synth bass treatment*	
Korg	ih	£399	3	Harmoniser panel to complement i-series keyboards	Jun 96
Lexicon	*300*	*£4641*	*3*	*Good-sounding studio effects with digital I/O*	*Dec 94*
Lexicon	LXP15	£979	2	Easy to use unit based on the classic LXP range	Dec 94
Lexicon	*MPX G2*	*£tbc*	*tbc*	*New processor especially for guitar effects*	
Lexicon	MPX100	£249	12	240 presets, 16 memories, full MIDI control, S/PDIF output	Sum 98
Lexicon	*MXP1*	*£1199*	*6*	*200 presets, 250 memories, MIDI control, S/PDIF I/O*	*Apr 97*
Lexicon	PCM80	£2133	10	Extremely impressive pro-level effects	Feb 95
Lexicon	*Reflex*	*£469*	*8*	*Budget, but usable, multi effects*	
Lexicon	Vortex	£468	16	Unusual 'morphing' effects system	
Nureality	*Vivid 3D Plus*	*£71*	*1*	*Adds 3D effect to sounds*	
Oberheim	GM1000	£800		18-bit, 512 presets, 9 simultaneous effects	
Oberheim	*GM400*	*£500*		*Smaller version of GM1000, 384 presets*	
Peavey	Addverb	£300	35	Superb range of effects types and features for the price	Feb 97
Peavey	*Bass-Fex*	*£699*	*18*	*Flexible, bass-geared effects with eight simultaneous effects*	
Peavey	DeltaFex	£155	9	2 adjustable parameters, but no memories, true stereo	Nov 96
Peavey	*Pro-Fex*	*£699*	*18*	*Full control over all 16 simultaneous effects make this extremely flexible*	
Peavey	Ultraverb 2	£319	6	MIDI controllable unit with 600 memories	
Peavey	*Univerb 2*	*£229*	*2*	*Rich-sounding reverbs and basic echo*	
Roland	RE-800	£265	5	Budget, mic-ready reverb and delay	
Roland	*RSS-10*	*£2199*	*1*	*3D sound creator using the Roland Sound Space system to great effects (geddit?)*	*Nov 95*
Sony	DPS-V55	£465	45	4-channel efffects, mic input, vocoder, tap timing function	
Sony	*DPS-V77*	*£1322*	*64*	*198 presets, 198 memories, true stereo in/out*	*Jul 97*
Sony	HRMP5	£449	100	Small, but impressive effects	
Sony	*SPD-V77*	*£1125*	*50*	*Studio quality, digital I/O, morphing feature*	
tc electronic	FireworX	£1700	12	999 memories, analogue/digital I/O	Jul 98
tc electronic	*G-Force*	*£1299*	*9*	*255 presets, 100 memories, MIDI, S/PDIF, true stereo guitar effects processor*	*Feb 98*
tc electronic	M5000	£2648	tbc	Open-ended, software-based super effects system	
tc electronic	*Wizard M2000*	*£1639*	*7*	*256 presets, 256 memories, analogue/digital I/O*	*Aug 96*
Viscount	EFX10	£200	18	MIDI controllable, true stereo	Jun 96
Viscount	*EFX100*	*£190*	*16*	*100 presets, 200 programs, 100 user*	
Yamaha	SPX990	£850	43	20-bit processing, superb effects and flexible programming	
Yamaha	*SPX1000*	*£1385*	*22*	*Excellent effects, the ability to take short samples and a digital I/O*	
Zoom	1201	£99	11	363 effects, with one banks devoted to reverbs, delays/multis and weird stuff	
Zoom	*Studio 1202*	*£200*	*16*	*512 presets, 2 adjustable parameters, 100 memories, 2-band EQ*	*Oct 96*
Zoom	Studio 1204	£199	17	Parallel effects, 2 adjustable parameters, true stereo, MIDI controllable, 2-band EQ	
Zoom	*7010 Fire*	*£300*	*28*	*Combined effects and guitar amp*	

NOISE GATES

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Aphex	105 Logic Assisted Gate	£399	Budget 4-channel noise gate	
ARX	*xGate*	*£528*	*6-channel noise gate with balanced I/O*	
BSS	DPR502	£793	Stereo noise gate	
BSS	*DPR504*	*£852*	*Quad noise gate*	
BSS	DPR 522	£464	Fully specified 2-channel gate with fine control over all its parameters	Apr 98
dbx	*172*	*£954*	*'Super gate' noise gate*	
dbx	904	£323	Noise gate module	
Digilab	*GSG-3D*	*£193*	*Dual noise gate*	
Digilab	GSG-4M	£193	Quad gate	
Drawmer	*DF320*	*£499*	*Noise filter*	
Drawmer	DS201X	£405	Dual noise gate with balanced XLRs	

Drawmer	*DS404*	*£617*	*Quad noise gate*	
Drawmer	MX40	£382	Quad punch gate	May 98
Klark Teknik	*DN510*	*£939*	*Advanced dual gate with MIDI*	
Klark Teknik	DN514	£857	Quad auto gate	
LA Audio	*4G*	*£399*	*Quad noise gate/filters*	
LA Audio	GX2	£249	Dual frequency-sensitive gate	
LA Audio	*MG*	*£995*	*16-channel programmable noise gate*	
Peavey	NGT-2	£183	Dual noise gate	
UFEX	*Gate*	*£247*	*Dual stereo noise gate*	
Vestax	DGT-202	£295	Dual-frequency turntable gate	

NOISE REDUCTION UNITS

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Behringer	SNR1000	£199	2-channel, single-ended noise reduction system	
Behringer	*SNR2000*	*£299*	*Multi-band, single-ended noise reduction system*	
George Massenburg Labs	9550	£7397	Digital dynamic noise filter for the restoration of old or damaged masters	
Peavey	*Q-Factor*	*£275*	*Dynamic noise reducer*	

PRE-AMPS

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Aphex	107 Thermionic Pre-amp	£549	2-channel valve-driven pre-amp	
ART	*Acoustic*	*£349*	*Pre-amp/processor for acoustic guitar*	*Dec 96*
ART	Tube Pac	£199	Valve pre-amp/compressor	Sep 98
Bellari	*RP520*	*£399*	*2-channel valve-driven pre-amp*	*Oct 97*
CLM Dynamics	DB400S	£1380	4-channel pre-amp with independent limiters	Jun 97
dbx	*286a*	*£230*	*Mic pre-amp/processor*	*Jan 98*
Demeter	VTDB-2B	£558	DI box	
DigiTech	*VTP-1*	*£1000*	*Valve pre-amp, solid state EQ, A/D converter*	*Oct 97*
Earthworks	LAB 101	£740	Single-channel, half-rack, 2Hz–100kHz, 3 output levels, phantom power	
Earthworks	*LAB 102*	*£740*	*2-channel, full-rack, 2Hz–100kHz, 3 output levels, phantom power*	
Fairman	TRC	£4582	Valve pre-amp, EQ, compressor	Jun 97
Focusrite	*Green One*	*£821*	*Dual pre-amp*	*May 97*
Focusrite	Green Three	£998	Pre-amp, compressor, de-esser, 3-band voice-optimised EQ	May 97
Focusrite	*Green Five*	*£1174*	*Pre-amp, line input, 6-band EQ, gate, compressor*	
Focusrite	Red One	£2261	Quad pre-amp	
Focusrite	*Tone Factory*	*£369*	*Analogue multi-processor and recording channel*	*Nov 98*
Joemeek	Studio Channel VC1	£704	Pre-amp/compressor/enhancer	Apr 97
Joemeek	*Pro Channel VC3*	*£299*	*Pre-amp/compressor/enhancer*	*Sep 96*
LA Audio	SPX2	£299	Stereo source selector pre-amp	Jul 98
Symetrix	*01*	*£2110*	*Mic pre-amp/voice processor, MIDI, digital I/O*	
TL Audio	3001	£351	4-channel mic pre-amp	Apr 97
TL Audio	*Indigo 2001*	*£704*	*4-channel valve pre-amp*	
TL Audio	Indigo 2031	£704	2-channel valve overdrive	
TL Audio	*PA1*	*£1052*	*2-channel pentode valve pre-amp*	
MANUFACTURER	**MODEL**	**PRICE**	**DESCRIPTION**	**REVIEW**
TL Audio	PA2	£1052	2-channel valve pre-amp	
TL Audio	*PA-5001*	*£469*	*4-channel valve pre-amp with phantom power and HPF*	*Jul 98*
TL Audio	PA-5050	£293	Valve pre-amp/compressor	Jul 98
TL Audio	*VI1*	*£465*	*8-channel valve interface*	
TL Audio	VIS	£347	Record/playback switching unit for VI1	
TL Audio	*VP-5051*	*£469*	*Mic/line pre-amp, compression, EQ, noise gating, t.. ough a valve*	*Aug 98*
Tube-Tech	MEC 1A	£2814	Pre-amp/3-band EQ/compressor with XLR/jack inp.. 48V phantom power	Jun 98

REVERBS

MANUFACTURER	MODEL	PRICE	EFFECTS	DESCRIPTION	REVIEW
Alesis	NanoVerb	£169	8	16 presets, 1 adjustable parameter, true stereo	Sep 96
Alesis	*Wedge*	*£449*	*28*	*Desktop unit with 4 control sliders for real-time editing*	
Roland	SRV-330	£856	22	High-quality reverbs using the RSS system for 3D sound	
Viscount	*Gammaverb*	*£118*	*12*	*16 preset variations per effect*	
Yamaha	Pro R3	£1056	6	Pre-/post-EQ reverb unit, 32-bit processing	
Yamaha	*REV100*	*£265*	*28*	*100 presets, 3 adjustable parameters, 100 memories, MIDI controllable*	
Yamaha	REV500	£399	9	100 presets, 100 memories, MIDI controllable, 32-bit processing	May 97

IN FOCUS: Lexicon MPX 100

Price: £249
Reviewed: Summer 1998

It's the Sellotape of the audio world: a generic description that stands for a quality product with an added *je ne sais quoi*. Lexicon is one of the most respected names in audio, but it usually comes at a price. However, the MPX 100 brings the Lexicon sound within everyone's reach, and in a dual-channel unit to boot.

The sacrifices made to produce a unit for this money are usually reflected around the back. The MPX 100 has two MIDI sockets (the Out and Thru are shared) and you'll have to manage with unbalanced jacks for analogue inputs and outputs. However, there's provision for stereo inputs and, best of all, digital output via S/PDIF. Naturally, the sound can't be faulted. Impressed? Trevor Curwen was, and the MPX 100 was awarded *The Mix* Editor's Choice in the Summer 1998 issue.

Quality sounds for less than £250

Brief Spec

- Effects: 240 presets, with 16 user memories
- Frequency response: 20Hz–20kHz
- Sample rate: 44.1kHz
- Conversion: 20-bit A/D, 20-bit D/A
- Internal processing: 24-bit

evolution of a new Species

Akai Professional is the future of sampling. We established the standard for professional digital sampling in 1986 with the S900 and every important advance in the years since then has had our big red logo on its box. Now with the launch of the radical S5000 and S6000, the cutting edge of progress has got even sharper. Power, function, ease of use, incredible pricing - we've just reset the standards every other sampler will have to be judged against.

Power. 8Mb of RAM expandable to a colossal 256Mb for over 25 minutes of CD quality stereo sampling, 128 voice polyphony (standard on the S6000 and upgradable from 64 on the S5000), 26 different filter types, new 20 bit multi channel effects (optional on the S5000), stereo digital I/Os and the capacity to handle up to 16 individual analogue outputs which are also configurable as stereo pairs. Two MIDI In/Out/Thru ports give 32-channel multi-timbral operation and the two SCSI ports mean flexibility in a SCSI chain. A Wordclock connector allows the new samplers to be integrated into an all-digital environment and an optional adat™ interface provides stereo digital inputs and sixteen digital outs for direct connection to digital mixers.

Function. Record to RAM or directly to hard disk for seamless transparent replay. Recognising that .wav is fast becoming the world-wide standard for audio interchange the S5000 and S6000 use .wav files as their native sample format allowing files to be loaded directly for instant playback from any PC formatted hard or removable disks attached to the samplers. The 'Virtual Sampling' function lets you assign disk recordings to keygroups so that long recordings may be triggered direct from disk within the context of a program. Not only does this enable disk recordings to be processed via the sampler's filters, LFOs, envelopes, etc., but a program containing 'virtual' samples appears in a Multi just like any normal program where it may be mixed, tuned and sent to the effects, elegantly integrating traditional sampling and disk recording. But we haven't forgotten our existing customers as the new samplers will read S1000 and S3000 sound libraries as well, making the decision to up-grade your sampler even simpler.

Ease of use. Both models have a large 6" graphic display with all common user-needed data such as number of items loaded and available memory space shown in the centre of the screen but unique to the S6000 is the seductive removable front panel. 16 function keys read against on-screen parameter boxes and with a large data wheel for adjustment give a 'Touch and Tweak' system that virtually eliminates the dreaded cursor trawl. Extensive use of graphics, icons, pop-up windows, progress displays, drop down menus and the inclusion of a PS2 port for ASCII keyboard attachment for naming give a computer like familiarity. And for more intricate operation we added a 'Window' function to allow power users deep level access to the sampler's heart.

Incredible pricing. Evolution has gone backwards here. The S5000 is £1799 (inc VAT) and the S6000 £2799 (inc VAT). Call for a brochure or visit your Akai dealer (look for the store with the queue outside).

adat™ is a registered trademark of Alesis Corporation USA

AKAI professional

Akai (UK) Ltd., EMI Division, Haslemere Heathrow Estate, The Parkway, Hounslow, Middlesex TW4 6NQ Tel 0181 897 6388 Fax 0181 759 8268
http://www.akai.com/akaipro

SAMPLERS

FORMATS: *Rack* samplers are the traditional production tool, capable of sampling sounds or complete sections, with some offering effects and HDR. *Drum Machines* combine short samples with a sequencer. *Phrase* (or sampling workstations) and *Keyboard* samplers are most suited to performing DJs and musicians, and may offer sequencing and effects.

POLYPHONY: More is generally better, though may (on cheaper models) mean poorer sound quality. Common offerings are 16, 32, 64, and now, even 128-note polyphony.

MEMORY: Again, more is better. It ranges from 384k to 128Mb (on pro models), and this is often expandable. The recently-developed *Flash ROM* retains data on powering-down.

OUTPUTS: Up to eight individual outputs as well as a main stereo pair are the norm for pro machines. On less advanced models you may find only a stereo pair, or two stereo pairs, although expander boards are available for some models.

OTHER FEATURES: *SCSI* will allow you to connect hard drives, CD-ROM drives, and computers to your sampler. *Digital I/O; synthesis; and sequencing* (ranging from notepad to 48-track affairs) are additional features on some units.

DRUM MACHINE

MANUFACTURER	MODEL	PRICE	RAM	DESCRIPTION	REVIEW
Akai	MPC2000	£899	2Mb	32-note polyphony, 2 outs, up to 48Mb RAM, sequencer	Apr 97
Akai	*MPC3000*	*£2799*	*2Mb*	*32-note polyphony, 10 outs, up to 16Mb RAM, S/PDIF input, sequencer*	*Jun 95*

PHRASE

MANUFACTURER	MODEL	PRICE	RAM	DESCRIPTION	REVIEW
Akai	Remix 16	£549	2Mb	8-note polyphony, 2 phono outs, up to 16Mb RAM, notepad sequencer, crossfader	Jul 96
Akai	*S20*	*£399*	*1Mb*	*8-note polyphony, 2 outs, up to 16Mb RAM, notepad sequencer*	*Mar 98*
Boss	SP202 Dr Sample	£299	2Mb	4-note polyphony, 2 outs, up to 4Mb RAM via SmartMedia	
Ensoniq	*ASR-X*	*£1199*	*2Mb*	*32-note polyphony, 2 outs, up to 34Mb RAM, synthesis, sequencer, effects*	*Nov 97*
Roland	SP-808 GrooveSampler	£1099	tbc	4-note poly, 4 phono outs, effects, HDR, built-in ZIP drive, D-Beam controller	
Yamaha	*SU10*	*£299*	*384K*	*4-note polyphony, 1 out, flash RAM, ribbon controller, scratch function*	

KEYBOARD

MANUFACTURER	MODEL	PRICE	RAM	DESCRIPTION	REVIEW
E-mu	E4K	£3526	4Mb	64-note polyphony, 8 outs, up to 128Mb, HD, sequencer, 76 semi-weighted keys	Aug 96
Ensoniq	*ASR-10*	*£1799*	*2Mb*	*31-note polyphony, 2 outs, up to 16Mb RAM, sequencer, HDR, effects, 61 keys*	
Ensoniq	ASR-88	£2999	16Mb	As ASR-10, but with maximum RAM, SCSI, CD-ROM drive, 88 weighted keys	
Kurzweil	*K2000S*	*£2799*	*2Mb*	*24-note polyphony, 6 outs, up to 64Mb RAM, synthesis, 76 semi-weighted keys*	
Kurzweil	K2500S	£4349	2Mb	48-note polyphony, 10 outs, up to 128Mb RAM, synthesis, 76 semi-weighted keys	
Kurzweil	*K2500S*	*£4610*	*2Mb*	*48-note polyphony, 10 outs, up to 128Mb RAM, synthesis, 88 weighted keys*	
Roland	DJ-70MkII	£1695	2Mb	24-note poly, 2 outs, up to 32Mb RAM, 8-track RPS, 8 pads, 1 scratch dial, 37 keys	

RACK

MANUFACTURER	MODEL	PRICE	RAM	DESCRIPTION	REVIEW
Akai	CD3000XL	£1699	8Mb	32-note polyphony, 10 outs, up to 32Mb RAM, HDR, built-in CD-ROM	Jan 97
Akai	*S2000*	*£649*	*2Mb*	*32-note polyphony, 2 outs, up to 64Mb RAM*	
Akai	S2000 Studio	£849	2Mb	As S2000, but with 8 outs and digital I/O board as standard	
Akai	*S3000XL*	*£1099*	*2Mb*	*32-note polyphony, 10 outs, up to 64Mb RAM, HDR*	*Jan 96*
Akai	S5000	£1799	tbc	64-note polyphony, up to 256Mb RAM, SCSI	
Akai	*S6000*	*£2799*	*tbc*	*128-note polyphony, up to 256Mb RAM, SCSI, removable front panel*	
E-mu	e6400	£2519	4Mb	64-note polyphony, 8 outs, up to 128Mb RAM, sequencer	
E-mu	*E4X*	*£3149*	*4Mb*	*64-note polyphony, 8 outs, 540Mb HD, up to 128Mb RAM, sequencer, effects*	*Aug 96*
E-mu	E4X Turbo	£4409	4Mb	128-note polyphony, 8 outs, 1Gb HD, up to 128Mb RAM, sequencer, effects	Oct 97
E-mu	*ESI-4000*	*£1199*	*2Mb*	*64-note polyphony, 4 outs, up to 128Mb RAM, SCSI*	*Feb 98*
E-mu	ESI-4000 Turbo	£1499	2Mb	As ESI-4000, but with 2 extra outs, effects, effects sub-mix out, S/PDIF I/O	Feb 98
E-mu	*ESI-4000 TurboZ*	*£1699*	*2Mb*	*As ESI-4000 Turbo, but with 100Mb ZIP drive*	*Feb 98*
Kurzweil	K2000RS	£2799	2Mb	24-note polyphony, 6 outs, up to 64Mb RAM, synthesis, sequencer, effects	
Kurzweil	*K2500RS*	*£3881*	*2Mb*	*48-note polyphony, 10 outs, up to 128Mb RAM, synthesis, sequencer, effects*	*Oct 97*
Peavey	SP+	£1169	2Mb	Sample playback module for SXII: 32-note polyphony, 4 outs, up to 32Mb RAM	
Peavey	*SXII*	*£399*	*256K*	*Sampling front-end for SP+: up to 16Mb RAM, SCSI*	
Yamaha	A3000	£1299	2Mb	64-note polyphony, 4 outs, up to 128Mb RAM, 3 effects processors	Jul 97

IN FOCUS: Synthing samps

Question: when is a sampler not a sampler? Answer: when it is a synth.

To some musicians, keyboard samplers like the E-mu E4K, Ensoniq ASR-series and Kurzweil K2000Ss are less playback samplers used for mixdowns (like the Akai S-series) and more samplers with powerful editing and synthesis facilities.

This is particularly true for the Kurzweils since the S suffix refers to their sampling abilities. If you're not convinced that you need a sampler straightaway, you can buy the keyboard as a synth workstation and upgrade to the sampling option when needs demand.

Then there are those keyboards listed in the sound gear section. These are primarily synths with sampling facilities added on, though these tend to be less powerful than those found on a dedicated unit. This group covers the E-mu E-Synth, the Korg Trinity series (OK, so it's a hard-disk recording option, but let's not quibble) and Yamaha EX-series.

Synthesizer or sampler? It all depends on your personal philosophy

So which should you go for? It depends whether, when confronted with a glass of beer, you see that the vessel is half-full or half-empty – it's down to your personal philosophy. If you spend half your life flying in vocals, then you'd be better off with the correct tools: one with a good display, great editing facilities and an industrial-strength OS.

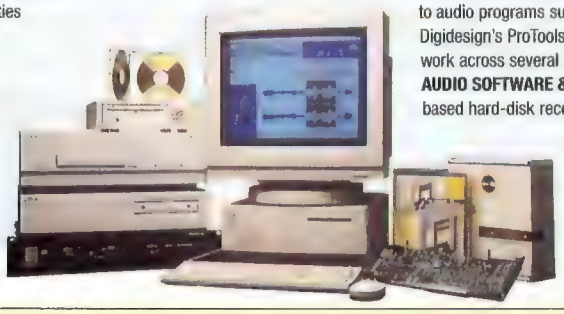
However, with the current vogue for twisting and modulating sounds, you'd be better equipped with a sampler with more in the synthesis department. Appearances can be deceptive, but both the Yamaha A3000 (especially with its new OS) and E-mu e6400 excel in this area. As 'our Graham' says on *Blind Date*, "the choice is yours".

MAC SOFTWARE & HARDWARE

SEQUENCERS: The sequencer is at the heart of every MIDI system. This list includes sequencers with digital audio capabilities that might require specific additional hardware (covered in 'Audio Hardware'), as well as more traditional versions.

SCORING: Scoring packages range from simple programs designed to provide quick output of score to fully specified professional music publishing solutions.

EDITOR/LIBRARIANS: A universal (or 'generic') editor or librarian is a single piece of software that is able to communicate with many different MIDI devices to edit or arrange their stored patches.



PLUG-INS: The increasing number of plug-ins available are relevant to audio programs such as Cubase VST, Digital Performer and Digidesign's ProTools. Some are program specific, while others will work across several packages.

AUDIO SOFTWARE & HARDWARE: This listing covers computer-based hard-disk recording (HDR) systems and other computer software and hardware.

MIDI INTERFACES: These are covered in the separate section entitled 'Interfaces'.

Wherever possible, Power Mac-specific gear is mentioned, as well as RAM requirements.

SEQUENCERS

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Cubase VST v4.0	Steinberg	£329	32Mb	Significant upgrade with many wide ranging changes, Power Mac only	Sep 98
Cubase VST-24 v4.0	*Steinberg*	*£649*	*32Mb*	*Replaces Cubase Audio XT and adds support for 24-bit hardware, Power Mac only*	*Sep 98*
Cubase VST Score v4.0	Steinberg	£499	32Mb	Adds professional scoring to Cubase VST, Power Mac only	Sep 98
Cubasis AV	*Steinberg*	*£129*	*16Mb*	*Supports only 16 MIDI tracks, but can handle 8 audio tracks on a Power Mac*	
CyberSound	InVision	$99	8Mb	Sequencer and software synthesizer combination	Aug 96
Digital Performer v2.3	*MotU*	*£549*	*tbc*	*Top-of-the-range sequencer with digital audio, real-time effects, sampler support*	*Jan 98*
Freestyle v2	MotU	£149	4Mb	Open, trackless sequencer/composer program with 'Sense Tempo' feature	
Logic Audio v3	*Emagic*	*£599*	*32Mb*	*Logic with integrated HDR, sample editor, effects processors*	*Mar 98*
Logic Audio Discovery	Emagic	£269	16Mb	Budget version of Logic Audio	Nov 94
Logic Audio Gold	*Emagic*	*£tbc*	*tbc*	*As Silver, but with 48 audio tracks, 8 inserts, 8 effects busses*	
Logic Audio Platinum	Emagic	£549	tbc	As Gold, but with 96 audio tracks, 24-bit support, TDM support	Oct 98
Logic Audio Silver	*Emagic*	*£tbc*	*tbc*	*As Logic, but with 24 audio tracks, EQ, 4 effects busses, VST plug-ins*	
Logic AV	Emagic	£75	tbc	Power Mac-only extension for Logic Audio	
Logic CBX	*Emagic*	*£75*	*tbc*	*Logic Audio extension for Yamaha CBX-D5 users*	
Logic DAE	Emagic	£75	tbc	Logic Audio extension for Digidesign users	
Logic TDM	*Emagic*	*£75*	*tbc*	*Logic Audio extension for TDM plug-in hardware*	
Logic v3	Emagic	£399	4Mb	Hugely powerful and flexible MIDI system	Apr 97
MasterTracks Pro v6	*Passport Designs*	*£50*	*2Mb*	*Pro-level, easy-to-use sequencer, but only single-staff notation*	
MasterTracks Pro Audio	Passport Designs	£100	tbc	As MasterTracks Pro, but with audio	
MAX v3.5	*Opcode*	*£379*	*tbc*	*Music programming language enabling you to build your own sequencer and more*	*Nov 98*
Metro v3.5	Cakewalk	£179	2Mb	Budget package that combines MIDI and audio, and some esoetric features	
microLOGIC AV	*Emagic*	*£99*	*tbc*	*Most of Logic's functionality with 16 tracks of digital audio*	
microLOGIC v2	Emagic	£79	4Mb	Entry-level version of Logic	Jul 94
microLOGIC XL	*Emagic*	*£119*	*4Mb*	*microLOGIC with GM files and keyboard shortcuts*	*Jul 94*
MusicShop v2	Opcode	£109	tbc	Sequencer/notation based around EZ Vision	
Performer v6.02	*MotU*	*£349*	*12Mb*	*With 8 tracks of digital audio on PowerMacs without additional hardware*	
StarterPac	Steinberg	£149	tbc	Cubasis and interface starter package	
Studio Vision Pro v4.0	*Opcode*	*£649*	*tbc*	*Major upgrade with new 3D look, rhythm editor, support for 24-bit audio, effects*	*Sep 98*
Vision v3.5 Basic	Opcode	£299	tbc	Graphical sequencer	

SCORING

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Composers' Mosaic	MotU	£399	2Mb	Top of the range notation package; specially priced academic version available	
Encore v4 Academic	*Passport*	*£250*	*4Mb*	*Special education version of Encore*	
Encore v4	Passport	£450	4Mb	Features MIDI input and automatic beaming	
Finale Allegro v2.01	*Coda*	*£350*	*2Mb*	*Cut-down version of Finale*	
Finale Mac Academic	Coda	£350	4Mb	Education version with full Power Mac support	
Finale Mac v3.2	*Coda*	*£700*	*4Mb*	*Features MIDI input, playback and Power Mac support*	
MusicTime	Passport	£100	4Mb	Cut-down version of Encore	
Nightingale	*Musicware*	*£395*	*5Mb*	*Flexible, open-ended score-writer*	
Overture v1.1	Opcode	£450	4Mb	Power Mac-native notation package	Nov 94

UNIVERSAL EDITORS & LIBRARIANS

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Edit One	Opcode	£100	4Mb	An individual Galaxy editor for a specific instrument	
Galaxy Plus Editors v2.1	*Opcode*	*£199*	*4Mb*	*Universal librarian plus editors for certain instruments*	*Jun 97*
SoundDiver v2.04	Emagic	£179	1Mb	Universal sound editor and librarian system	
UNISYN v1.5	*MotU*	*£279*	*2Mb*	*Recent upgrade prvoides seemless integration with Performer v6 sequencer*	

PLUG-INS

MANUFACTURER	MODEL	PRICE	PLATFORM	DESCRIPTION	REVIEW
Antares	JVP	£430	TDM	Voice processor	
Antares	*MDT*	*£516*	*TDM*	*Multi-band dynamics tools*	*Oct 96*
Antares	SST	£430	TDM	Corrects or simulates listening conditions	
Aphex	*Aural Exciter Illpi*	*£399*	*TDM*	*Aural Excitement comes to ProTools*	*Sum 98*
Aphex	Big Bottom Pro	£299	TDM	Aphex-style bass enhancement	Sum 98
Apogee	*Mastertools*	*£934*	*TDM*	*UV22 encoding for mastering*	
Arboretum	Hyperprism DAS	£311	AudioSuite	25 plug-ins based on programs from Arboretum's TDM and stand-alone versions	
Arboretum	*Hyperprism TDM*	*£311*	*TDM*	*23 different effects*	*Oct 96*
Arboretum	Hyperprism VST	£276	VST	24 effect algorithms with real-time control	Spr 97
Bias	*SFX Machine*	*£225*	*Cross*	*Modular synthesis*	*May 98*
Digidesign	D-Fi	£351	AudioSuite	4 plug-ins: analogue filter, grunge, rectification, varispeed	Aug 97
Digidesign	*DINR*	*£tbc*	*AudioSuite/TDM*	*Noise reducer*	*Nov 98*
Digidesign	DPP-1	£445	TDM	Pitch processor	

MANUFACTURER	MODEL	PRICE	PLATFORM	DESCRIPTION	REVIEW
Digidesign	D-Verb	£445	TDM	Reverb processor	Oct 96
Digidesign	*SampleCell TDM*	*£352*	*TDM*	*SampleCell sampling*	
Drawmer	Dynamics	£539	TDM	Gate/compressor/expander/limiter	Dec 97
Focusrite	*d2*	*£880*	*TDM*	*EQ*	
Focusrite	d3	£716	AudioSuite/TDM	Multi-dynamics processor comprising dual compressor/limiter	Apr 98
GRM	*Tools*	*£306*	*TDM*	*5 plug-ins*	*Oct 96*
Intelligent Devices	IQ	£823	TDM	Matching equaliser	Feb 97
MotU	*PureDSP*	*£tbc*	*AudioSuite*	*Pitch-shifting and time-scaling*	
Opcode	fusion: Filter	£125	AudioSuite	3 types of filtering	Nov 98
Opcode	*fusion: Vinyl*	*£79*	*Cross*	*Transforms samples to classic turntable sounds*	
Opcode	fusion: Vocode	£125	Cross	Vocoder with 5-band graphic EQ	
Prosonic	*Roomulator*	*£299*	*VST*	*High-spec reverb*	*Mar 98*
Steinberg	D-Pole	£149	VST	Waldorf technology producing classic synth filtering	Nov 98
Steinberg	*Loudness Maximizer*	*£169*	*VST*	*Compressor/limiter*	*Mar 97*
Steinberg	Magneto	£299	VST/TDM	Analogue tape saturation emulator	Mar 98
Steinberg	*RedValve•It*	*£499*	*TDM*	*Valve pre-amp simulator*	*May 97*
TC Works	MasterX	£699	TDM	Multi-band dynamics processing	Aug 98
TC Works	*TC Tools*	*£774*	*TDM*	*Reverb and chorus*	*Oct 96*
Wave Mechanics	PurePitch	£576	TDM	Real-time pitch processor	
Waves	*AudioTrack*	*£299*	*VST*	*EQ, compressor/expander, noise gate*	*Mar 97*
Waves	EasyWaves	£125	Cross	Dynamics, reverb and 3-band EQ bundle	
Waves	*Native Power Pack*	*£399*	*Cross*	*6 plug-in bundle*	*Spr 97*

AUDIO SOFTWARE

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Alchemy	Passport	£500	4Mb	Near-classic SCSI sample editor	
Audioshop v2	*Opcode*	*£150*	*4Mb*	*Sample editor and CD-ROM controller*	
Hyperprism v2.1	Arboretum	£266	tbc	21 real-time effects, PPC-native	
MasterList	*Digidesign*	*£434*	*tbc*	*Audio cue sheet and edit list software for mastering systems*	*Sep 96*
MetaSynth	Arboretum	£229	16Mb	'Graphic' sound generation software	
Peak v1.53	*BIAS*	*£225*	*8Mb*	*Audio editor supporting 3rd-party plug-ins and sampler transfer*	*Nov 97*
Pro Tools v4.0	Digidesign	£400	tbc	New AudioSuite architecture providing Sound Designer II processing features	Jan 97
ProTools PowerMix v4	*Digidesign*	*£716*	*tbc*	*Software only; works with any Digidesign hardware or Power Mac AV system*	*Sep 96*
ReBirth RB-338 v1.5	Steinberg	£149	16Mb	Virtual synth with 2x TB-303s, a TR-808, effects, sequencer for Power Macs	
ReCycle!	*Steinberg*	*£199*	*4Mb*	*Sample and groove processor/resampler*	
Session	Digidesign	£187	tbc	HDR software; Power Macs need no extra hardware	Sep 96
Sound Designer II	*Digidesign*	*£369*	*4Mb*	*Sample processor supporting most sample formats*	*Sep 96*
Time Bandit	Steinberg	£199	4Mb	Groove, tempo and pitch-shifting resampling system	
ToolBelt	*Synchro Arts*	*£387*	*tbc*	*Pro Tools complement, with added effects*	*Oct 97*
Turbosynth SC	Digidesign	£304	1Mb	Virtual synthesis, sample manipulation and processing	
WaveConvert Pro	*Waves*	*£249*	*tbc*	*Format and word depth conversion software*	*Jun 98*

AUDIO HARDWARE

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Digidesign	882	£892	I/O audio interface for NuBus or PCI Macs	Sep 96
Digidesign	*882*	*£1785*	*Studio interface for NuBus or PCI Macs*	*Sep 96*
Digidesign	888	£2678	I/O audio interface for NuBus or PCI Macs	Sep 96
Digidesign	*Audio Media II*	*£469*	*Analogue/digital I/O, Sound Designer II, for NuBus Macs*	*Sep 96*
Digidesign	Audio Media III	£704	18-bit stereo AD/DA converters, stereo S/PDIF I/O, for PCI Macs	Sep 96
Digidesign	*Bridge I/O*	*£1244*	*Adds another 8 I/O via 882/888*	*Sep 96*
Digidesign	DSP Farm	£2231	4xDSP upgrade for TDM systems	Sep 96
Digidesign	*ProTools 24*	*£7132*	*24-bit digital recording system, with PCI card, interface and software*	*Feb 98*
Digidesign	Pro Tools III	£6240	16-track core system including I/O card and Pro Tools software, for NuBus Macs	Aug 96
Digidesign	*Pro Tools III*	*£7131*	*16-track core system including I/O card and Pro Tools software, for PCI Macs*	*Aug 96*
Digidesign	Pro Tools Expansion	£4464	Adds 16-tracks to Pro Tools III, for NuBus Macs	Sep 96
Digidesign	*Pro Tools Expansion*	*£5228*	*Adds 16-tracks to Pro Tools III, for PCI Macs*	*Sep 96*
Digidesign	Pro Tools Project	£2232	8-track recording with Pro Tools software, for NuBus and PCI Macs	Sep 96
Digidesign	*SampleCell II*	*£1499*	*8-note polyphonic sampling card, for NuBus Macs*	*Sep 96*
Digidesign	Session 8	£1785	Core system including Session software and I/O card, for PCI Macs	Sep 96
Digidesign	*Session 8 Upgrade*	*£4369*	*Upgrade from Session 8 hard/software to Pro Tools III*	
Digidesign	Session 8XL	£5226	Full Session virtual recording and mixing studio	
Digidesign	*SoundTools II*	*£3091*	*Entry-level incarnation of Digidesign HDR system*	
Digidesign	SoundTools II Upgrade	£3047	Upgrade from SoundTools II to Pro Tools III	
Emagic	*Audiowerk8*	*£499*	*16-bit stereo, 2 in, 8 out PCI-based AD/DA converters, stereo S/PDIF I/O*	*Jun 97*
Korg	1212 I/O	£599	PCI-based card, 10 in, 10 out PCI-based AD/DA converters, S/PDIF I/O	Jun 97
Mackie	*HUI*	*£3171*	*'Human User Interface' for ProTools*	*Feb 98*
MotU	2408	£995	24 I/O (analogue, ADAT, DA-88, S/PDIF), 16- or 24-bit recording at 44.1/48 kHz	
MotU	*Digital Timepiece*	*£1049*	*Audio/timecode synchroniser*	*Sep 97*
Sonorus	Studi/o	£599	24-bit PCI card, sample rate conversion 32–48kHz, upto 16 channels	Aug 98
Steinberg	*ACI*	*£349*	*Sequencer-controlled ADAT machine control box*	

UPDATES... UPDATES... UPDATES...

Are you a manufacturer or distributor? Are your products listed in *The Mix Buyer's Guide*? To make sure that we have all your products correctly listed, please keep us updated with the latest prices and model names of your product ranges. If you *do* spot an inaccuracy, or change your prices, or delete a model, then please send us the correct details:

By Email: **themix@futurenet.co.uk**

Alternatively, you can contact us by post: ***The Mix Buyer's Guide*, Future Publishing Ltd, 30 Monmouth Street, Bath BA1 2BW,** or fax us on **01225 732353.**

Remember, it's in your interest to be in the *Buyer's Guide*, so make sure you check your entry, and continue sending us information!

ATARI SOFTWARE & HARDWARE

This section mainly covers the ST and its variants, but the Falcon is mentioned in specific cases.

The original budget studio computer, the Atari range maintains its appeal in studios for its built-in MIDI ports and low price. The sequencer is at the heart of every MIDI system, and this list covers the many available for the Atari. Scoring packages range from simple programs designed to provide quick output of score to more sophisticated music publishing solutions. Universal (or generic) editors and librarians are single pieces of software that are able to communicate with many different devices. Audio software and hardware cover sampling systems and other computer hardware.
NOTE: *The Mix* is committed to covering the Atari platform for as long as it is being used.

SEQUENCERS

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Breakthru Plus	Software Technology	£130	1Mb	As Breakthru, but with 32 MIDI channels	
Breakthru Score Printing Kit	*Software Technology*	*£50*	*-*	*Score-printing add-on for Breakthru*	
Breakthru v1.2	Software Technology	£100	1Mb	MIDI/sample sequencer with score and drum editing	
Breakthru v2	*Software Technology*	*£130*	*1Mb*	*64-track version of Breakthru with extensions*	
Breakthru v2 Plus	Software Technology	£150	1Mb	32-channel version with special interface	
Cubase Audio Falcon	*Steinberg*	*£699*	*4Mb*	*Sequencer/16-channel recorder using Falcon interface*	*Jun 96*
Cubase Lite	Steinberg	£99	1Mb	Entry-level Cubase with arrange and score edit only	Jun 96
Cubase Score v2	*Steinberg*	*£449*	*2Mb*	*MIDI sequencing and full score editing/printing*	*Jun 96*
Digital Home Studio	Softjee	£tbc	tbc	Pattern-based sample and MIDI-sequencing, HDR, sample editing, synth, for Falcon	
MIDIGrid	*CDP*	*£149*	*1Mb*	*Phrase-based graphic sequencer*	
Logic v2.5	Emagic	£59	tbc	Upgrade only available to registered users	
Sequencer One	*Software Technology*	*£20*	*512K*	*Straightforward beginners' MIDI sequencer*	
Sequencer One Plus	Software Technology	£50	512K	Expanded Sequencer One with better editing	

SCORING

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Music DTP Ed	Take Control	£229	1Mb	Intermediate user's package with MIDI input	
Music DTP Lite	*Take Control*	*£111*	*1Mb*	*Entry-level notation package with MIDI input*	
Music DTP Pro	Take Control	£347	1Mb	Pro-level package with real-time MIDI input	

UNIVERSAL EDITORS & LIBRARIANS

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
CMpanion	Software Technology	£50	512K	For Roland D-series and Roland desktop modules	
Patch Vision	*Intrinsic Technology*	*£50*	*512K*	*Universal librarian desk accessory with search and sort options*	
PC128	Intrinsic Technology	£19	512K	Desk accessory sound organiser; runs in colour or mono	
Studio Module	*Steinberg*	*£159*	*2Mb*	*Universal editor, MIDI set-up saver and editor; needs Cubase*	

AUDIO SOFTWARE

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
A-Loader MSK-100	Newtronic	£25	1Mb	Sample loader for S-10/S-220/MKS-100	
Avalon v2.1	*Steinberg*	*£349*	*1Mb*	*Mono editor supporting over 18 sample types*	
Clarity 16 v2.0	Microdeal	£60	4Mb	Sample editor for the Falcon with 44.1/48kHz sampling and HDR	
Replay 16 v1.11	*Microdeal*	*£80*	*1Mb*	*16-bit sampling cartridge and editor*	
Slam v1.1	Intrinsic Technology	£89	512K	Librarian/manager for Akai samplers	
Stereo Master	*Microdeal*	*£39*	*tbc*	*8-bit stereo sampler/editor*	
Zero-X v2.0	System Solutions	£169	1Mb	ReCycle!-type groove-based sample editor	

AUDIO HARDWARE

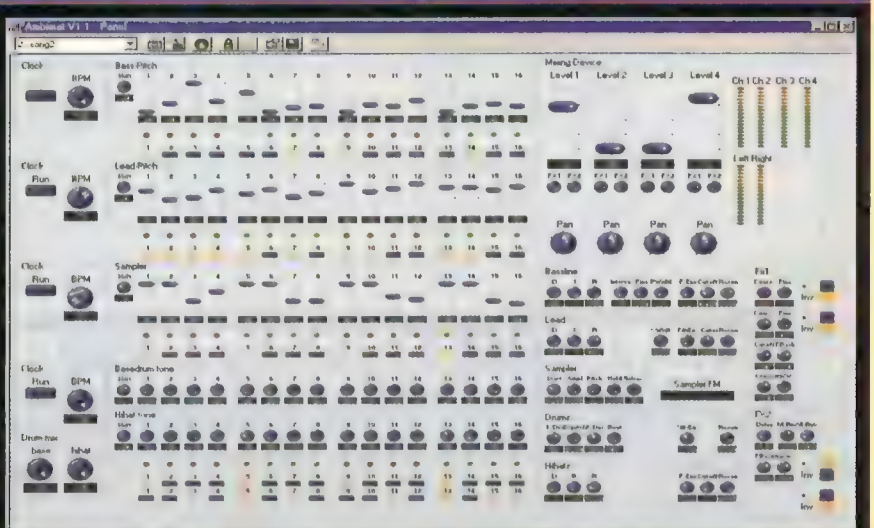
MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Microdeal	Replay 16	£129	16-bit sampling cartridge and editor	
Microdeal	*Replay Stereo*	*£79*	*Stereo 8-bit sampling system*	
Steinberg	AudioSpecter	£399	Spectrum analyser software and cartridge for Falcon	
Steinberg	*FDI*	*£329*	*Digital interface cartridge for Falcon*	

IN FOCUS: PC software synths

Until Propellerheads' ReBirth RB-338, software synths were regarded as also-rans – shareware, not musthave-ware. The program was born on the net; news of the demo that emulated two Roland TB-303 Basslines and a Roland TR-808 Rhythm Composer spread like a virus through newsgroups, and the commercial product, distributed by Steinberg, was and is a great success.

This has reawakened developers' interest, as reflected in *The Mix* recently. Both the commercial Seer Systems Reality and VAZ Plus for the PC (the shareware Virtual Software Synthesizer) were included in issue 50, while Native Instruments Generator v1.5 was awarded *The Mix* Editor's Choice in issue 54. And, if this hasn't been enough, there's been coverage of Roland's Virtual Sound Canvas and Yamaha's SoftSynth.

Is the hardware synth dead? No, but competition is always good thing, and if soft synths encourage improvements in hardware synths, then musicians – whatever their inclination – are the winners.



Native Instruments Generator is evidence of the current interest in soft synths

PC SOFTWARE & HARDWARE

SEQUENCERS: The sequencer is at the heart of every MIDI system. This list includes sequencers with digital audio capabilities that might require specific additional hardware (covered in 'Audio Hardware').
SCORING: Scoring packages range from simple programs designed to provide quick output of scores to fully specified professional music publishing solutions.
EDITOR/LIBRARIANS: A universal (or 'generic') editor or librarian is a single piece of software able to communicate with many different devices.
PLUG-INS: The increasing number of plug-ins available are relevant to audio programs such as Cubase VST and Digital Performer. Some are program specific, while others will work across several packages.
AUDIO SOFTWARE & HARDWARE: This listing covers hard-disk recording (HDR) systems and other computer hardware.
MIDI INTERFACES: These are covered in the separate section entitled 'Interfaces'.

Wherever possible, Windows 95 or 98-specific software is mentioned. Soundcards are listed under 'Audio Hardware'.

SEQUENCERS

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Audio Pro	Evolution Electronics	£100	4Mb	MIDI/audio sequencer with 16 styles and karaoke	
Audition GS/XG	*Sunrize*	*£82*	*4Mb*	*MIDI sequencer with GS/XG editing*	
Cakewalk Express	Cakewalk	£49	2Mb	2 audio tracks, digital effects	
Cakewalk Home Studio v5	*Cakewalk*	*£99*	*2Mb*	*2 audio tracks, compatible with DirectX plug-ins*	
Cakewalk Pro Audio Deluxe	Cakewalk	£369	16Mb	As Pro Audio, but with 2 CD-ROM collection of additional software	Nov 98
Cakewalk Pro Audio v7	*Cakewalk*	*£299*	*16Mb*	*256 MIDI and 64 audio tracks, effects, plug-ins, HDR; requires Win95 and P100*	*Nov 98*
Cakewalk Professional	Cakewalk	£199	2Mb	256 MIDI and 8 audio tracks,though fewer plug-ins, none in real-time	
Cakewalk SongStation v5	*Cakewalk*	*£69*	*2Mb*	*Entry-level composition system on CD*	
Computer Music Starter Kit	Voyetra	£69	tbc	Includes MIDI Orchestrator Plus, Jam Grid, and a MIDI cable	
Cubase Audio XT v3.5	*Steinberg*	*£699*	*16Mb*	*Top-of-the-range flagship pavkage with audio and the kitchen sink*	
Cubase VST v3.5	Steinberg	£329	tbc	The classic sequencer with Virtual Studio Technology	
Cubase VST Score v3.5	*Steinberg*	*£499*	*tbc*	*As Cubase VST, but with professional socring*	
Cubase On Line	Heavenly Music	£13	-	On-line tutorial and help software for Cubase	
Cubasis AV	*Steinberg*	*£99*	*8Mb*	*64-track, entry-level program based around Cubase*	
Cubasis Audio	Steinberg	£199	4Mb	Cubasis with WAV recording support	
Digital Orchestrator Plus	*Voyetra*	*£130*	*4Mb*	*Windows-based sequencer with digital audio and effects*	
Freestyle	MotU	£149	4Mb	Open, trackless sequencer/composer program	
Logic Audio Discovery	*Emagic*	*£99*	*16Mb*	*Budget version of Logic Audio*	*Nov 96*
Logic Audio Gold	Emagic	£tbc	tbc	As Silver, but with 48 audio tracks, 8 inserts, 8 effects busses	
Logic Audio Platinum	*Emagic*	*£549*	*24Mb*	*As Gold, but with 96 audio tracks, 24-bit support, Soundscape support*	*Oct 98*
Logic Audio Silver	Emagic	£tbc	tbc	As Logic, but with 24 audio tracks, EQ, 4 effects busses, VST plug-ins	
MasterTracks Pro v6	*Passport*	*£150*	*2Mb*	*Pro-level, easy-to-use sequencer, but only single-staff notation*	
microLOGIC v2	Emagic	£99	2Mb	Entry-level version of Logic for Windows users	
microLOGIC XL	*Emagic*	*£119*	*4Mb*	*microLOGIC with GM files and keyboard shortcuts*	
MIDI Workshop	Passport	£70	1Mb	Entry-level version of MasterTracks with multimedia	
MIDIGrid	*CDP*	*£149*	*1Mb*	*Phrase-based graphic sequencer*	
Musicator Audio	Musicator A/S	£300	8Mb	Sequencer/hard-disk recorder with notation, mixing, SMPTE/MTC sync	
Musicator Windows v2.1	*Musicator A/S*	*£200*	*4Mb*	*Windows version of Musicator GS with hard-disk recording facility*	
PC Drummer v1	Sunrize	£58	2Mb	GM rhythm pattern editor: very basic stuff	
Powertracks Pro	*PG Music*	*£50*	*1Mb*	*48 tracks, MIDI file support, GS editor and sync*	
Quartz	Canam	£40	4Mb	Multimedia sequencer, links MIDI to WAV files	
Quartz	*Canam*	*£40*	*8Mb*	*8-track hard-disk recorder*	
QuickScore Pro	Dr T's	£99	4Mb	Score editor with extra MIDI functions	
Sequencer Plus Classic	*Voyetra*	*£100*	*640K*	*500-track DOS/text-based sequencer*	
Sequencer Plus Gold v4.1	Voyetra	£250	640K	3,300-track expanded version of Classic	
Sequencer Plus Junior	*Voyetra*	*£40*	*512K*	*Entry-level DOS/text MIDI sequencer*	
Sound Studio	Evolution Electronics	£60	4Mb	32-track sequencer and 2-track recorder	
Sound Studio Pro	*Evolution Electronics*	*£150*	*4Mb*	*100-track sequencer and 4-track recording package*	
Sound Studio Gold	Evolution Electronics	£150	4Mb	256-track sequencer with 16 audio tracks	Spr 97
Sound Suite	*Voyetra*	*£140*	*4Mb*	*Bundle which includes Orchestrator Plus, WAV editor, AV players and MIDI files*	
StarterPac	Steinberg	£149		Cubasis and interface starter package	
Vision v2.5 for Windows	*Opcode*	*£234*	*12Mb*	*Vision for the Mac has been ported for Windows*	*Mar 97*

SCORING

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Finale Allegro	Coda	£189	tbc	Cut-down version	
Finale 1997	*Coda*	*£499*	*8Mb*	*Music notation software, requires Win95/Pentium*	

UNIVERSAL EDITORS & LIBRARIANS

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
MIDIQuest Windows v5	SoundQuest	£250	4Mb	Generic editor and librarian	
SoloQuest	*SoundQuest*	*£100*	*2Mb*	*Single-instrument editor for Windows; DOS version also available*	
Studio Module	Steinberg	£159	2Mb	Universal editor, MIDI set-up saver and editor; needs Cubase	
Unisyn v1.2	*MotU*	*£229*	*4Mb*	*Universal editor and librarian*	

PLUG-INS

MANUFACTURER	PROGRAM	PRICE	PLATFORM	DESCRIPTION	REVIEW
Aphex	Aural Exciter Type III	£tbc	Soundscape	Bass enhancement system	
Opcode	*fusion: Filter*	*£125*	*DirectX*	*3 types of filtering*	*Nov 98*
Opcode	fusion: Vinyl	£79	DirectX	Transforms samples to classic turntable sounds	Sum 98
Opcode	*fusion: Vocode*	*£125*	*DirectX*	*Vocoder with 5-band graphic EQ*	*Sum 98*
Power Technology	DSP FX	£395	DirectX	32-bit audio processing, Win 95/NT, can run as self-contained program	Jun 98
Sonic Foundry	*Sound Forge Plug-Ins*	*£299*	*Sound Forge*	*Batch converter, noise reducer, spectrum analyser plug-ins*	*Jul 97*
Sonic Foundry	XFX 1	£99	Cross	6 plug-in bundle, including compression and EQ	Jul 98
Sonic Foundry	*XFX 2*	*£99*	*Cross*	*6 plug-in bundle, including reverb and delay*	*Jul 98*
Soundscape	The Audio Toolbox	£235	Soundscape	Multi-effects package	
Soundscape	*Reverb*	*£275*	*Soundscape*	*Reverb plug-in*	*Jul 95*
Soundscape	Time Module	£150	Soundscape	Time compression plug-in	Jul 95
Steinberg	*Declicker*	*£299*	*WaveLab*	*Click removal plug-in*	

MANUFACTURER	PROGRAM	PRICE	PLATFORM	DESCRIPTION	REVIEW
Steinberg	Denoiser	£299	WaveLab	Noise removal plug-in	
Steinberg	*D-Pole*	*£149*	*VST*	*Waldorf technology producing classic synth filtering*	*Nov 98*
Steinberg	Loudness Maximiser	£299	WaveLab	Volume adjustment plug-in	
Steinberg	*Magneto*	*£299*	*WaveLab*	*Analogue tape saturation emulator*	*Mar 98*
TC Works	Dynamizer	£599	Soundscape	Dynamics processes	
TC Works	*Native Essentials*	*£159*	*DirectX*	*Entry-level bundle comprising reverb, EQ and dynamics processing*	
TC Works	Reverb	£525	Soundscape	Reverb with independent control of decay time for 3 frequency bands	
Wave Mechanics	*Reverb*	*£275*	*Soundscape*	*High-quality reverberation algorithm*	
Waves	EasyWaves	£125	Cross	Dynamics, reverb and 3-band EQ bundle	
Waves	*Native Power Pack*	*£399*	*Cross*	*6 plug-in bundle*	*Spr 97*

AUDIO SOFTWARE

PROGRAM	MANUFACTURER	PRICE	RAM	DESCRIPTION	REVIEW
Audio Architect v3	Karnataka Group	£120	tbc	Modular analogue synthesizer	
Beat & Drum Machine	*Data Becker*	*£20*	*tbc*	10-track audio arranger supporting 16-bit .WAV samples	
CD Architect	Sonic Foundry	£259	tbc	Red Book-standard CD burning software, for Win95 and NT, inc Sound Forge XP	Nov 97
CDP	*CDP*	*£495*	*tbc*	*High-end sampler/synthesis/sound processing system*	
Cool Edit Pro	Syntrillium	£349	8Mb	64 audio tracks, DirectX plug-in support, Cakewalk integration, for Win95 and NT	Feb 98
DART	*Tracer*	*£349*	*tbc*	*Removes clicks, hums, buzzes and other noises from WAV files*	
DSP FX	Power Technology	£395	tbc	32-bit audio processing, Win 95/NT, can run as DirectX plug-in	Jun 98
FastEdit	*DAL*	*£189*	*tbc*	*Editor for WAV files with MIDI trigger playlist; works with any Win soundcard*	
Generator v1.5	Native Instruments	£150	tbc	Modular analogue synthesizer and DirectX plug-in	Oct 98
Music Video Machine	*Data Becker*	*£25*	*tbc*	*8-track audio arranger supporting 16-bit .WAV samples and effects*	
Native PowerPack	Waves	£499	tbc	WaveConvert plus processing and effects plug-ins for SoundForge, WaveLab	
Reality	*Seer Systems*	*£300*	*24Mb*	*Fully fledged synth with real-time control, requires CD-ROM, Win95, P133*	*Jul 98*
ReBirth RB-338 v1.5	Steinberg	£149	16Mb	Virtual synth with 2x TB-303s, a TR-808, effects, sequencer for Pentiums	
ReCycle!	*Steinberg*	*£199*	*4Mb*	*Sample and groove processor/resampler*	
Resample Pro	KCCM	£99	4Mb	Sample format converter covering all major types	
Samplitude Pro	*SEK'D*	*£250*	*4Mb*	*High-quality hard-disk recorder/editor*	*Mar 95*
Samplitude Studio	SEK'D	£400	tbc	16-track version of Samplitude Pro, needs fast hard disk	Mar 95
Session v2.52	*Digidesign*	*£175*	*tbc*	*2–4 tracks of HDR, 8 tracks of simultaneous playback, plus EQ, mix automation*	*Sep 96*
SoundForge v4.0a	Sonic Foundry	£299	8Mb	Sample editing, timestretching and format conversion, CD-ROM required	May 97
SoundForge XP	*Sonic Foundry*	*£99*	*tbc*	*Basic editing only in this budget version*	
Soundstation	Sunrize	£58	4Mb	Sample editor with Fourier analysis, synthesis, MIDI pitching	
Techno Maker	*Data Becker*	*£25*	*tbc*	*8-track audio arranger supporting 16-bit .WAV samples and effects*	
Techno Maker Plus	Data Becker	£30	tbc	As Techno Maker, but with more samples	
WaveConvert v1.01	*Waves*	*£229*	*tbc*	*File format converter; handles sample rates and bit depths*	
Wave For Windows v2	Turtle Beach	£69	tbc	Digital sample editor	
WaveLab v2.0	*Steinberg*	*£329*	*16Mb*	*Digital audio stereo recorder, editor and processor, and CD burner, for Win 95/98/NT*	*Sep 98*
Wave Safe	Calistan	£65	tbc	Protection and salvage of digital audio files	Apr 98
Wave Safe Pro	*Calistan*	*£130*	*tbc*	*As above, with additional support and features*	*Apr 98*

AUDIO HARDWARE

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Aardvark	Aark 20/20	£775	20-bit PCI card with 8-in/8-out analogue and 24-bit digital S/PDIF connection	Oct 98
AdB	*Multi!WAV*	*£449*	*AES/EBU and S/PDIF digital I/O card*	
AdB	Multi!WAV Pro 18/20	£549	Pro-level, 24-bit digital I/O card with ADAT connectors	
Audio and Video	*SADiE*	*£2300*	*4-track HDR plus Windows editing software, timecode, digital I/O, DSP, MIDI*	
AVM	Apex	£299	32-note polyphony, 16-part multi, up to 64Mb RAM, analogue I/O, MIDI	
CreamWare	*tripleDAT*	*£1290*	*Digital I/O card with HDR software*	*Dec 96*
Creative Labs	AWE32 PnP	£210	32-note polyphony, 512K RAM, wavetable synthesis, sampling, 3-format CD-ROM	
Creative Labs	*AWE64*	*£169*	*64-note polyphony, 512K RAM, expandable to 8Mb, wavetable synthesis, sampling*	*Apr 97*
Creative Labs	AWE64 Gold	£199	64-note polyphony, 4Mb RAM, expandable to 8Mb, wavetable synthesis, sampling	Jul 97
Creative Labs	*SoundBlaster 16 Value*	*£86*	*Full-length 16-bit sampling true stereo card, FM synth, MIDI*	
Creative Labs	SoundBlaster 16 Value	£86	Full-length 16-bit sampling true stereo card, FM synth, MIDI for IDE interface	
Creative Labs	*SoundBlaster 32*	*£146*	*16-bit, 44.1kHz sampling, 32-note GM wavetable synth, up to 28Mb RAM*	
Creative Labs	WaveBlaster II	£67	Soundcard based on E-mu's synthesis; 32-note polyphony, GM compatibility	
DAL	*CardD Plus*	*£599*	*16-bit simultaneous HD recording and playback*	
DAL	Digital Only CardD	£349	Digital-only version of CardD	
DAL	*I/O CardD*	*£249*	*Adds S/PDIF digital I/O to CardD*	
Digidesign	882	£892	I/O audio interface	Sep 96
Digidesign	*882*	*£1785*	*Studio interface for Session 8*	*Sep 96*
Digidesign	888	£2678	I/O audio interface	Sep 96
Digidesign	*Audiomedia III*	*£599*	*18-bit stereo AD/DA converters, stereo S/PDIF I/O*	*Sep 96*
Digidesign	Bridge I/O	£1244	Adds another 8 I/O via 882/888	Sep 96
Digidesign	*SampleCell II*	*£1139*	*8-note polyphonic sampling card, for ISA PCs*	*Sep 96*
Digidesign	Session 8	£1785	Core system including Session software and I/O card	Sep 96
Echo	*Darla*	*£299*	*20-bit stereo, 2 in, 8 out PCI-based AD/DA converters, Win95*	
Emagic	Audiowerk8	£499	16-bit stereo, 2 in, 8 out PCI-based AD/DA converters, stereo S/PDIF I/O, Win95	Jun 97
Emu	*Audio Production Suite*	*tbc*	*PCI soundcard-based system with 64-note wavetable sampling synthesis*	
Ensoniq	Soundscape Elite	£239	16-bit, wavetable card with excellent Ensoniq sounds	
Frontier	*WaveCenter*	*£498*	*16-bit ISA card, with S/PDIF and ADAT digital I/O but no analogue audio*	*Mar 98*
Gadget Lab	Wave/4	£399	16-bit, 4 in, 4 out, MIDI interface, daughterboard socket	
Gravis	*PnP*	*£150*	*44.1kHz, 16-bit sampling, GM synth with 1Mb ROM on Plug and Play card*	
Gravis	PnP Pro	£200	Plug and Play with added 512K sample RAM	
Innovative Quality	*SAMM*	*£399*	*Digital system for use with Yamaha's ProMix 01*	
Innovative Quality	SAW Classic	£249	Original 4-track version of SAW at entry-level price	
Innovative Quality	*SAW Plus*	*£699*	*Expanded, 16-track version of SAW; needs fast hard disk and P90 or better*	
Innovative Quality	SAW v6	£399	Pro-quality 4-track HDR system with editing, mixing, playback and effects	
Koch	*TripleDAT*	*£1173*	*Card and software for editing and remastering DATs*	
Lexicon	Studio	£2649	Full-length PCI card and external interface for 32-track recording with Cubase VST	Sep 98
MAXi Sound	*64 Home Studio*	*£150*	*44.1kHz, 16-bit sampling, 64-note polyphony, expandable to 16Mb RAM, PnP*	*May 97*

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
MediaTrix	AudioTrix Pro	£270	Full duplex AD/DACs, CD-ROM ports, MIDI cable, GM and 3D-sound option	
MediaTrix	*AudioTrix 3D-XG*	*£231*	*Full-duplex AD/DACs, MIDI interface, 4Mb wavetable ROM*	
Midiman	DiO	£tbc	1-in, 1-out AES/EBU and S/PDIF digital audio card	
Midiman	*DMan*	*£249*	*16-bit, full-duplex digital audio card*	
Midiman	DMan 2044	£249	20-bit digital audio card with 4 I/Os, on-board DSP, synth and MIDI interface	Nov 98
Midiman	*DMan Digital Studio*	*£279*	*DMan card with Samplitude software*	
Midiman	EQMan	£89	7-band stereo graphic equaliser PC card	
MotU	*2408*	*£995*	*24 I/O (analogue, ADAT, DA-88, S/PDIF), 16- or 24-bit recording at 44.1/48 kHz*	
MotU	MIDI Timepiece AV	£649	8x8 MIDI interface with SMPTE, LTC video, ADAT Digidesign Superclock sync	Apr 97
New Dimensions	*Technosound PC*	*£40*	*Real-time effects processor board for SoundBlaster cards*	
Orchid	NuSound PnP	£100	3D surround-sound wavetable synth with Plug and Play support for Win95	
Reveal	*WAVExtreme32*	*£80*	*GM soundcard*	
Roland	ATW-10	£360	16-bit sampling card with GM synthesis and Audio Toolworks editing software	
Roland	*SCC-1*	*£299*	*24-note, 16-part GM/GS card with MIDI interface*	
Sonorus	Studi/o	£599	24-bit PCI card, sample rate conversion 32–48kHz, upto 16 channels	Aug 98
Soundscape	*Mixtreme*	*£499*	*16 audio channels, 2xTDIF digital I/O, DSP, wordclock/superclock I/O, MIDI*	*Aug 98*
Soundscape	Mixtreme	£549	As above, but with S/PDIF	Aug 98
Soundscape	*SS810-1*	*£1495*	*8-channel analogue upgrade: TDIF, ADAT I/O, Word/Super Clock*	*Jul 95*
Soundscape	SS810-2	£449	8-channels of TDIF to ADAT conversion in both directions for ADAT-interfaced gear	
Soundscape	*SS810-3*	*£449*	*8-channels of TDIF to unbalanced analogue I/O*	
Soundscape	SSAC-1	£600	Accelerator card upgrade, enables additional program and 8-channel TDIF	Jul 95
Soundscape	*SSHDR1*	*£2500*	*Rackmount, 8-track HDR system*	*Jul 95*
Soundscape	SSHDR1-Plus	£3200	12 tracks, 10-in, 12-out, PC-based system with 24-bit processing, 48kHz sampling	Mar 98
Terratec	*EWS64XL*	*£399*	*2 analogue I/O, 1I/2O S/PDIF digital, 2 MIDI interfaces, 32 channels*	*May 98*
Turtle Beach	CD Master II	£849	Pro digital mastering with included CD-ROM drive kit	Dec 94
Turtle Beach	*Digital I/O upgrade*	*£120*	*Digital port upgrade for Fiji and Pinnacle cards*	*Dec 94*
Turtle Beach	Fiji	£369	High-quality soundcard, supports hard-disk recording	Dec 94
Turtle Beach	*Fiji with Digital I/O*	*£469*	*Fiji card with digital connection support*	
Turtle Beach	Interface adapter	£20	MIDI port for Maui and Monterey cards	
Turtle Beach	*Montego A3D Xtreme*	*£120*	*64-note wavetable sound card, 18-bit converters, 3D sound, requires P75*	*Sep 98*
Turtle Beach	Pinnacle	£479	Latest high-quality soundcard	
Turtle Beach	*Pinnacle with Digital I/O*	*£579*	*Pinnacle card with added digital ports*	
Turtle Beach	TBS 2000	£169	GM, 48kHz sampling, simultaneous record/playback	
Turtle Beach	*Tropez Plus*	*£269*	*16-bit wavetable card, sampling, CD-ROM interface, up to 12Mb RAM, MIDI*	
Yamaha	DB50XG	£129	Daughterboard featuring GM/XG synth, 3 effects processors	
Yamaha	*DSP Factory DS2416*	*£700 tbc*	*PCI card with 16 busses, 24 channels and digital interfacing*	*Nov 98*
Yamaha	MU10XG	£199	External SW60XG module, including PC/Mac cable and Cubasis	
Yamaha	*SW60XG*	*£149*	*Stand-alone DB50 ISA card with effects; includes Cakewalk Express*	*Jan 97*

Wanted
Film & TV
Composers

Music For The Media
Britain's First Home Study Course
For Film & TV Composers

"Really detailed and meticulously constructed - it's a triumph"
Debbie Wiseman - composer Wilde, Tom & Viv

- Written & tutored by full-time professional media composers.
- Course text packed with inside knowledge & practical advice. Every course printed to order - up-to-date and made-to-measure.
- No need to read music - equally challenging whatever your background.
- Audio cassettes - interviews & inside knowledge with top composers & real life customers. Hear the people who hire composers tell you what they are really looking for.
- Course video includes award winning documentaries, commercials, and even a complete short feature film! All with SMPTE timecode.
- 10 practical graded units - sig tunes, commercials, documentary, drama, de-mystifying writing to picture, showreels, winning work & much more.

How It Works

Each unit takes you through a new area of the media, teaching you about the business while introducing essential musical skills, developing your originality, the satisfaction of writing to picture, writing better tunes. Read the comprehensive text, listen to interviews with top composers in the field and the real life customers. Practical, approachable and business like.

Assignments

With each of the 10 units there is an assignment - all real TV & film jobs. You'll be briefed by the real life customer and work to the actual video tape or story board. Submit a demo to your tutor on cassette who'll give you a professional opinion & tuition

Sfida Creative Learning
Tel 0181 749 2828 http://www.sfida.com
Phone for a brochure!
14 day money back guarantee Pay by installments

SUBSCRIBE NOW!

THE Mix
TROUBLE-SHOOTING YOUR PC
The 15 most common PC audio problems solved!
Tascam TM-D1000
WORLD EXCLUSIVE!
Join the digital mixing revolution for less than a grand
TASCAM

Don't forget to get your tickets to this years
National Music Show '98
Call the hotline number on
01369 708010
for special ticket prices NOW!
It's gonna be BIG!

SIX Issues for £21.99

Subscribe today and you'll get the next 6 issues of **THE MIX** delivered to your door - postage free - **for only £21.99!**

SUBSCRIPTION HOTLINE

01458 271122

All you need to do to get THE MIX delivered to your door every month is call the subscription hotline and quote order code: **MIXSP56**

or fill in the form below and return it to our FREEPOST address

YES! I want to subscribe to THE MIX from only £21.99

☐ UK (cheque/credit card)	6 issues	£21.99	**Save £1.95**
☐ UK (cheque/credit card)	12 issues	£44.28	**Save £3.60**
☐ Europe/Eire (airmail)	12 issues	£67.88	
☐ Rest of World (airmail)	12 issues	£77.88	

Your subscription will start with the next available issue

Title.....Initial.....Surname.....

Address .....

.....Country.....

Postcode .....Telephone.....

ORDER CODE: MIXSP56

☐ **Cheque** - payable to Future Publishing Ltd (Sterling cheques drawn on UK bank accounts only)

☐ **Mastercard** ☐ **Visa** ☐ **Switch** Switch Issue No. / Valid date_____

Card no: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

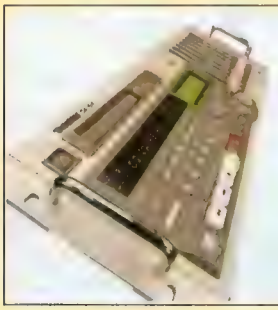
Expiry date: ☐☐/☐☐ Signed_____ Date_____

UK send this form POSTAGE FREE to
The Mix Subscriptions,
Future Publishing Ltd, FREEPOST
(BS4900), Somerton, Somerset, TA11 6BR
(No Stamp required)

Overseas send this form to
The Mix Subscriptions, Future Publishing Ltd,
Cary Court, Somerton, Somerset, TA11 6TB,
United Kingdom

☐ Tick if you do not wish to receive direct mail from other companies

MULTITRACK RECORDERS



ANALOGUE: Analogue cassette and reel-to-reel represent old technology as digital strengthens its hold on the market. Reel-to-reel recorders are virtually extinct, while cassette still offers a cheap way into recording with Portastudios.

DIGITAL TAPE: The Alesis ADAT popularised the high-end consumer video format of S-VHS. It records 40 minutes of audio on a two-hour tape. Up to 16 ADAT machines can be synced together to provide 128 audio tracks. Hi-8 cassettes are used by Tascam's rival DTRS modular eight-track system, which can deliver 128 tracks in a multi-machine set-up. Tape for DTRS is much cheaper than for the ADAT system.

MINIDISC: MD exists in two formats: Audio and Data. Audio discs are used on MD hi-fi systems, while Data discs are used by computers and MD four-tracks. Most MD systems will only work at 44.1kHz and few have digital outputs.

HARD DISK RECORDING: Whether it's a computer system or a dedicated hard-disk recorder, the exponential rise in storage capacity and drive efficiency has taken hard-disk recording into a new era, with dozens of tracks and software controlled mixers and effects available. You'll eventually have to back-up your data when the drive gets full.

MAGNETO-OPTICAL: MO is a removable format able to store large amounts of data. The cost of multitrack recording on this convenient format is cost-effective too.

ANALOGUE CASSETTE

MANUFACTURER	MODEL	PRICE	TRACKS	DESCRIPTION	REVIEW
Fostex	X-14	£149	4	1 input, built-in mic	
Fostex	*XR-3*	*£249*	*4*	*2 inputs, Dolby B NR, 2-track simultaneous record, high speed*	
Fostex	XR-5	£379	4	6 inputs, 2-band EQ, Dolby C NR, 2 aux, 2-track simultaneous record, high speed	
Fostex	*XR-7*	*£499*	*4*	*6 inputs, 3-band EQ, Dolby C NR, 2 speeds*	
Peavey	MCR-4A	£919	4	2-speed	
Peavey	*MCR-4S*	*£1012*	*4*	*2-speed, sync*	
Tascam	134	£1190	4	2-speed, rackmount machine for AV work	
Tascam	*414*	*£349*	*4*	*7 inputs, 2-band EQ, dbx NR, 2 aux, high speed, 4-track simultaneous record*	*Spr 97*
Tascam	424MkII	£499	4	8 inputs, 3-band EQ, dbx NR, 2 aux, 2 speeds, MIDI sync, auto punch in/out	
Tascam	*488MkII*	*£1299*	*8*	*12 inputs, 3-band EQ, dbx NR, 2 aux, high speed, MIDI sync, phantom power, inserts*	
Tascam	Porta03MkII	£169	4	2 inputs, Dolby B NR, 2-track simultaneous record	
Yamaha	*MT4X*	*£559*	*4*	*4 inputs, 3-band EQ, dbx NR, 2 aux, 2 speeds, MIDI sync*	*Aug 96*
Yamaha	MT50	£299	4	5 inputs, 2-band EQ, dbx NR, 1 aux, 4-track simultaneous record	
Yamaha	*MT8X II*	*£999*	*8*	*14 inputs, 3-band EQ, dbx NR, 2 aux, high speed, MIDI sync, phantom power, inserts*	

ANALOGUE REEL-TO-REEL

MANUFACTURER	MODEL	PRICE	TRACKS	DESCRIPTION	REVIEW
Tascam	TSR-8	£2299	8	High-quality, flexible 8-track half-inch tape recorder	

DIGITAL TAPE

MANUFACTURER	MODEL	PRICE	TRACKS	DESCRIPTION	REVIEW
Alesis	ADAT XT20	£2299	8	New ADAT with 20-bit recording, wider dynamic range, lower quantisation noise	May 98
Alesis	*ADAT M20*	*£5874*	*8*	*Professional digital audio recorder with 20-bit recording and 24-bit converters*	
Fostex	RD8	£3999	8	ADAT compatible recorder with lots of control; S-VHS format	July 94
Rane	*RC24A*	*£1087*	-	*Converts ADAT into 24-bit 4-track machine*	
Rane	RC24T	£1028	-	Converts DA-88 into 24-bit 4-track machine	
Tascam	*DA-38*	*£2099*	*8*	*Entry-level version of the DA-88 with internal patch bay and shuttle control*	*Oct 96*
Tascam	DA-88	£2799	8	ADAT-rival digital multitrack tape; uses cheaper Hi-8 tape	
Tascam	*DA-98*	*£3999*	*8*	*Timecode, MIDI, video, digital interfacing, scrub wheel, large LCD read-out*	*Nov 97*

MINIDISC

MANUFACTURER	MODEL	PRICE	TRACKS	DESCRIPTION	REVIEW
Sony	MDM-X4 Mk II	£599	4	10 inputs, 3-band EQ, 2 aux, MMC sync, MTC/MIDI Clock in/out	Aug 98
Tascam	*564*	*£1099*	*4*	*12 inputs, 3-band EQ, 2 aux, MMC sync, MTC/MIDI Clock out, S/PDIF out*	*Sep 96*
Yamaha	MD4	£699	4	6 inputs, 3-band EQ, 1 aux, MTC/MIDI Clock out	Sep 96
Yamaha	*MD8*	*£999*	*8*	*12 inputs, 3-band EQ with sweepable mid, 2 aux, MTC/MIDI Clock out*	*May 98*

HARD DISK

MANUFACTURER	MODEL	PRICE	TRACKS	DESCRIPTION	REVIEW
Akai	DPS12	£1299	12	6 inputs, 3-band EQ, 2 sends, 20 track mixer, integral Jaz drive, optional effects	Jun 98
Akai	*DR4d*	*£1499*	*4*	*16-bit, 32–48kHz sample rate, AES/EBU inputs, SMPTE board*	
Akai	DR8	£2799	8	As DR4d, but with enhanced editing and mixing controls	May 95
Akai	*DR16*	*£3999*	*16*	*As DR8, but with 128-track operation possible with 8xDR16*	*Oct 97*
E-mu	Darwin	£2879	8	4 inputs, 8 outputs, 8x2 digital mixer, interface options, S/PDIF I/O	
E-mu	*Darwin*	*£2999*	*8*	*As above, but with 1Gb hard disc*	*Mar 96*
Ensoniq	PARIS	£2499	16	4 inputs, 4 outputs, 4-band EQ, 16 sends, 8 returns	Jan 98
Fostex	*D-80*	*£1299*	*8*	*8 inputs, 8 outputs, MIDI and digital I/O in rack-mounted caddy-loading IDE unit*	*May 96*
Fostex	D-90	£1499	8	As D-80, but with ADAT interface	Jul 97
Fostex	*D-160*	*£2931*	*16*	*8 inputs, 16 outputs, memory management and a wide variety of interface options*	*Dec 97*
Fostex	DMT-8 VL	£999	8	8 inputs, 2-band EQ, 2 sends, 2 stereo returns, 2-track simult. record, S/PDIF I/O	Mar 97
Fostex	*FD-4*	*£399*	*4*	*4 inputs, 3-band EQ, 2 sends, S/PDIF I/O and media-independent*	*Nov 98*
Korg	D8	£849	8	2 inputs, 2 outputs, 2-band EQ, 2 sends, 2 stereo returns	Mar 98
Lexicon	*Studio*	*£2649*	*32*	*12 inputs, 12 outputs, effects, plug-in effects, 24-bit sampling, external interface*	*Sep 98*
Otari	RADAR	£8813	8	48 minutes of audio per track, 16-bit sampling, 32–48kHz, analogue/digital I/O	May 97
Otari	*RADAR*	*£13278*	*16*	*48 minutes of audio per track, 16-bit sampling, 32–48kHz, analogue/digital I/O*	*May 97*
Otari	RADAR	£18213	24	48 minutes of audio per track, 16-bit sampling, 32–48kHz, analogue/digital I/O	May 97
Roland	*DM-800*	*£3975*	*4*	*Digital mixer/recorder, supports 8 tracks with external drive*	
Roland	VS-840	£949	8	Digital multitracker, with 12-channel mixer, built-in effects and Zip drive	
Roland	*VS-880 VXPanded*	*£1499*	*8*	*8 inputs, 3-band digital EQ, 2 sends, MIDI-automated mixer, 1.4Gb HD, effects*	*Jun 97*
Roland	VS-1680	£2199	16	8 inputs, digital EQ, 2 sends, digital I/O, 4 stereo effects, 2Gb HD, optional CD-R	Jul 98
Vestax	*HDR-6*	*£2349*	*6*	*MIDI-controllable recorder with sophisticated built-in digital mixer*	

MAGNETO-OPTICAL DISC

MANUFACTURER	MODEL	PRICE	TRACKS	DESCRIPTION	REVIEW
Akai	DD1500	£tbc	tbc	Digital audio workstation	
Genex	*GX8000*	*£6456*	*8*	*24-bit digital audio workstation*	*Feb 97*

WAY OUT WEST

music company

tel: 0181 744 1040/1050 fax: 0181 744 1095

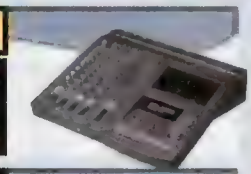
WAY OUT WEST **WORLDWIDE MAIL ORDER** WAY OUT WEST

Voted "Best shop for studios" by Evening Standard Magazine

4 TRACK RECORDING

TASCAM

PORTA 02 £145
NEW 414 £269
424 II £295

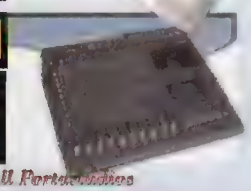


Fostex

NEW FOSTEX FD4
DIGITAL 4 TRACK
INC 230 MB EZ-FLYER DRIVE £449

TASCAM

488 MkII
8 track
only £499

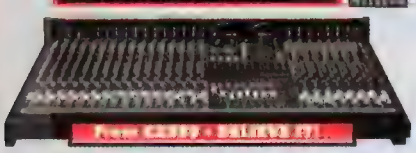


free TAPES with all Portastudios

MIXING DESKS

Best Demos Best Prices

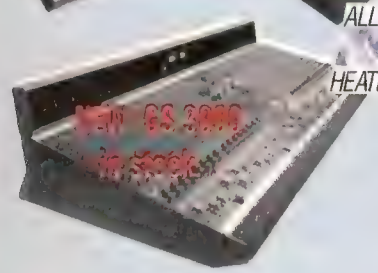
SOUNDCRAFT GHOST
24 L.E. & 32 L.E. - IN STOCK!



BEHRINGER EURORACK

BEHRINGER EURORACK 2642A £299

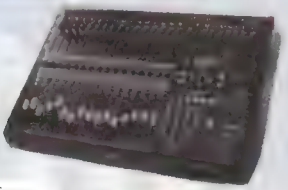
ALLEN HEATH



W.O.W. STAR PRODUCTS

SPIRIT

DIGITAL 328



A superb 42 channel digital mixer for under three grand! Everything on board, including 2 Lexicon programmable effects, ADAT optical & TDIF connectors, 24 bit A/D converters, snapshot automation, excellent EQ, 100mm moving faders & much more!

IN STOCK
CALL FOR A DEMO

HHB CIRCLE 5

The new Harbeth HHb Circle 5 studio monitors offer Active or Passive facility with a detailed, accurate and dynamic sound, at a price well below the sub £900 competition 190W 2ch amp & 8" bass/middriver for a tight low end An wise investment for any studio

TASCAM

Tascam's DA series DTRS format digital recorders have long been regarded as the industry standard for studios worldwide It looks as though they're going to clean up on entry level digital mixers, as well! Just look what you get for £899 - 24 bit, 8 analogue ins, TDIF, 4 groups, 3 assignable on-board f/x, 128 snapshot memories, 3 band sweep Eq and loads more!

DIGITAL TM-D1000 £899

BUDGET CONDENSER MIKES

THE RODE NT1 & NEUMANN TLM 103 If you are in the market for a budget condenser, then look no further! These two really deliver the goods and represent stunning value for money Firstly the NT1 is a cardiod, low noise mic, designed for vocals and instruments giving excellent clarity and presence for just £199 Then the Neumann offers exceptional performance based on the world famous U87 - just £699

0% Finance now available

Call for details Subject to status

Outboard

OUTBOARD

8 TRACK + RECORDING

YAMAHA

YAMAHA MD8
DIGITAL STUDIO
SLOW

TASCAM

DA 38 £1695
DA 88 £BEST
DA 98 £BEST

Roland

VS-840 £899
VS-880 VX
VS-1680

ALESIS

ADAT LX 20/M20
£BEST

KORG

D8 DIGITAL
RECORDING
STUDIO £799

FOSTEX

D-80.....£999
D-90 BL...£1179
NEW D-160..£1899

PACKAGES

TASCAM TMDT000 & FOSTEX D90 BL £2049

£2599

MICS & MONITORS

audio technica
MICS
SENNHEISER
NEUMANN
AUDIX / OCTAVIA
RODE
AKG
SHURE
beyerdynamic
MONITORS
GENELEC
TANNOY
EVENT
Soundcraft
YAMAHA
ALESIS

ALESIS

NANOVERB	£99
MICROVERB IV	£145
MIDIVERB IV	£195
NEW Q 20	£895
NANOCOMP	£99
SR 16	£189
MEQ	£99

LEXICON

VORTEX	£CALL
MPX 1	£699
NEW MPX 100	£299
REFLEX	£199
LXP 15	£450
PCM 80	£1399

BEHRINGER

V-AMP	£59
DUALFEX	£99
AUTOCOM	£149
COMPOSER	£169
ULTRAFEX II	£99
INTELLIGATE	£99
POWERPLAY	£195

DIGITECH

TSR 24	£CALL
STUDIO QUAD	£399
VOCALIST II	£CALL
STUDIO VOCALIST	£CALL

YAMAHA

REV 100	£229
SPX 990	£729
SPX 1000	£1199
REV 500	£319

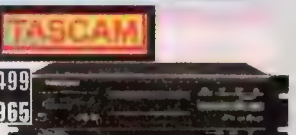
OTHERS

APHEX C2	
EXCITER	£199
ZOOM 1201	£99
ZOOM 1204	£199

DCC / DAT/CDR

TASCAM

DA 20 II.....£499
DA 30 II.....£965



Fostex

D5 DAT only£525
NEW CR200 CDR £999

47London Road Twickenham TW1 3SA UNITED KINGDOM

PROFESSIONAL SERVICE
WE BUY USED GEAR & P/X
FREE PARKING
5 MINUTE FROM
TWICKENHAM STATION

47London Road Twickenham TW1 3SA UNITED KINGDOM

sale@wowmusic.demon.co.uk

EXPRESS NATIONWIDE & OVERSEAS DELIVERY
W.O.W MOBILE NATIONWIDE INSTALLATION SERVICE

WAY OUT WEST

music company

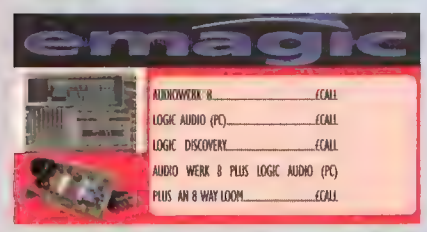
tel: 0181 744 1040/1050 fax: 0181 744 1095

WAY OUT WEST **WORLDWIDE MAIL ORDER** WAY OUT WEST

Recently voted "Best shop for studios" by Evening Standard Magazine

SAMPLERS

HARDWARE & SOFTWARE



BARGAIN BASEMENT

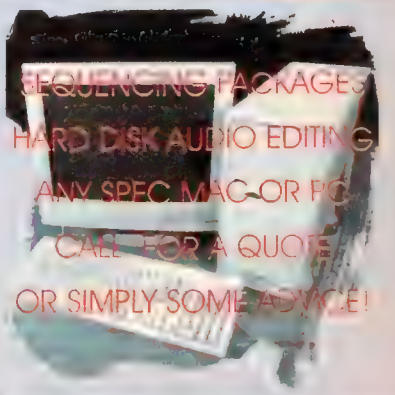
AUDIO DESIGN RECORDING F769X-R.....£465
ALESIS ADAT XT.....£949
ALESIS D4 DRUM MODULE.....£199
ALESIS 3630 COMPRESSOR.....£125
ALLEN & HEATH SYSTEM 8 16:4:2 DESK.....£250
AKAI S1000 SAMPLER.....£439
APHEX EXCITER.....£99
AUDIO LOGIC PA 88A ENHANCER.....£59
ALESIS MEQ 230 GRAPHIC EQ.....£125
ATARI GAMES 100'S OF TOP TITLES JOB LOT.....£50
AKAI S20 SAMPLER NEW.....£399
ART SGX 2000 TUBE MULTI/FX.....£225
BEHRINGER BASSFLEX.....£99
BOSS PRO CL-50 COMP/LIMITER.....£75
CASIO VX-8M RACK SYNTH.....£150
DRUM KAT TRIGGER 8 PAD.....£299
DRAWMER DL241 COMPRESSOR.....£199
DRAWMER DS 404 QUAD GATE.....£295
DRAWMER 1961 TUBE EQ.....£675
FOSTEX B16 1/2" 16 TRACK + 4050.....£1099
FOSTEX R8 1/4" 8 TRACK (BOXED).....£545
FOSTEX M80 1/4" 8 TRACK.....£399
FOSTEX A8 1/4" 8 TRACK.....£375
FOSTEX 4030 + 4035 E16 REMOTE + SYNC.....£375
HARRISON X300 PRO POWER AMP.....£199
KORG KEC 42 COMPANDER.....£50
LA AUDIO GX2 NOISE GATE.....£125
LINN DRUM LM2.....£299
MUSIC QUEST MQX32M PC CARD.....£115
NOVATION BASS STATION RACK.....£249
PHONIC PCL 3200 COMPRESSOR.....£99
PEAVEY BASS SPECTRUM.....£125
PHILLIPS DCC 730.....£179
ROLAND JD-800 SYNTH.....£699
ROLAND MKS-20 DIGITAL PIANO MODULE.....£299
ROLAND MC-202.....£225
ROLAND D-110 SYNTH MODULE.....£175
STEINBERG SMP II MIDI PROCESSOR.....£275
STUDIOMASTER 16 INTO 4 MIXER + F/CASE.....£175
STUDIOMASTER 8-4-2 MIXER.....£149
SAMSON MPL 2242 MIXER.....£199
SOUNDTRACS TOPAZ 24-8-2 + M/BRIDGE.....£1299
SONY TCD-D3 PORTABLE DAT.....£275
SECK 18-8-2 MIXER.....£350
TASCAM TSR-8 1/2" 8 TRACK.....£775
TASCAM 238 RACK-MOUNT 8 TRACK.....£375
TASCAM DA 88.....£1499
TLA VIL 8 CHANNEL VALVE INTERFACE.....£225
YAMAHA NS-10M MONITORS.....£185
YAMAHA TG-300 SYNTH MODULE.....£135
YAMAHA TX 81Z FM TONE GENERATOR.....£119
YAMAHA MT 8X 8 TRACK PORTASTUDIO.....£399

0% Finance available

Call for details Subject to status

W.O.W. PRO-AUDIO AD ON PAGE

KEYBOARDS/MODULES



PROFESSIONAL SERVICE
WE BUY PART EXCHANGE & P/X
OVER 5000 SQ.FT. OF RETAIL
5 MINUTES FROM
M25 HEATHROW EXIT

Wardour Road Westcott W1 35A 1 REED KINGDOM

wsale@wowmusic.demon.co.uk

EXPERT NATIONWIDE & OVERSEAS DELIVERY
W.O.W. MOBILE NATIONWIDE INSTALLATION SERVICE
EDUCATIONAL DISCOUNTS

CONTROLLERS & INTERFACES

CONTROLLERS: These include master keyboards, guitar controllers, wind controllers, breath controllers, trigger interfaces and drum pads.
MIDI/CV CONVERTERS: For hooking up your pre-MIDI synths to your system, a MIDI/CV converter is needed. These offer a varying number of channels (one for each synth) and may also offer other interfacing options.
INTERFACES: MIDI interfaces can be either universal or platform specific (i.e just for Mac, PC or Atari). Interfaces for the Atari usually offer multiple MIDI connections. Some interfaces combine several other functions, such as a MIDI patchbay along with timecode options.
DIGITAL CONVERTERS: These are specific devices that convert analogue signals to the digital domain, or vice versa. Some feature MIDI options as well.

MIDI CONTROLLERS

MANUFACTURER	MODEL	PRICE	TYPE	DESCRIPTION	REVIEW
Akai	EWI3020	£349	Wind	Sax-like controller	Feb 95
Akai	*ME 35T*	*£299*	*Trigger*	*Takes drum pad or mic triggers and converts to MIDI*	
Akai	MX1000	£1299	Keyboard	Full-spec controller; the PM76 Piano Card turns it into a digital piano	
Blue Chip Music Technology	*Axon AX 100*	*£700*	*Module*	*Pitch-to-MIDI guitar interface for use with the Roland GK-2A*	
Blue Chip Music Technology	Axon AX 100SB	£800	Module	Pitch-to-MIDI guitar interface with synth board for use with the Roland GK-2A	
Casio	*GZ-5*	*£65*	*Keyboard*	*32 mini keys, velocity slider, pitchbend,mod wheels plus a few built-in sounds*	
Doepfer	LMK1+	£699	Keyboard	88-note hammer action master keyboard with 4 zones	
Doepfer	*LMK2+*	*£799*	*Keyboard*	*88-note hammer action master keyboard with 4 zones*	
Doepfer	LMK4+	£1099	Keyboard	88-note hammer action master keyboard with 8 zones	
Doepfer	*MAQ 16/3*	*£595*	*Sequencer*	*Analogue-style sequencer for MIDI*	
Doepfer	Regelwerk	£449	Table unit	Hardware sequencer and MIDI fader unit	
Doepfer	*Schaltwerk*	*£999*	*Table unit*	*Hardware sequencer with CV option*	
E-mu	Launch Pad	£429	Table unit	Central control panel for an entire MIDI system	
evolution	*DanceStation*	*£80*	*Keyboard*	*25 full-sized keys, supplied with 1000 PC .WAV file loops and software*	
evolution	Music Creator	£50	Keyboard	49 full-sized keys, supplied with cables, Key West software	
evolution	*Music Creator Pro*	*£120*	*Keyboard*	*49 full-sized keys, includes pitch/mod wheels, cables, Audio Pro software*	
Fatar	CMS 61	£280	Keyboard	61-note unweighted keyboard with recesses for computer keyboard, mouse	
Fatar	*MP1*	*£250*	*Bass pedals*	*Single octave bass pedal controller aimed at organists*	
Fatar	Studio 1100	£900	Keyboard	88-note, aftertouch-sensitive keyboard, 4 zones, memories	Apr 95
Fatar	*Studio 1100FC*	*£1100*	*Keyboard*	*Flightcased version of Studio 1100*	
Fatar	Studio 1176	£750	Keyboard	76-note version of Studio 1100	
Fatar	*Studio 2001*	*£1250*	*Keyboard*	*88 weighted keys and pro controller features*	
Fatar	Studio 2001FC	£1450	Keyboard	Flightcased version of the 2001	
Fatar	*Studio 49*	*£120*	*Keyboard*	*49-note velocity-sensitive keyboard*	
Fatar	Studio 610	£230	Keyboard	61-note velocity-sensitive keyboard	
Fatar	*Studio 610+*	*£300*	*Keyboard*	*Studio 610 with aftertouch-sensitive, weighted keys*	
Fatar	Studio 900	£650	Keyboard	88-note keyboard aimed at live musicians	
Fatar	*Studio 900FC*	*£849*	*Keyboard*	*Flightcased version of Studio 900*	
Goldstar	GMK49	£169	Keyboard	49-key master keyboard	Mar 95
Kawai	*Datacat*	*£149*	*Keyboard*	*37-note keyboard with transpose, pitch-bend, assignable mod wheel*	
Kawai	MDK61II	£409	Keyboard	61-note, velocity-sensitive keyboard with pitchbend, mod wheel, bank select	
Keyfax	*Phat.Boy*	*£150*	*Table unit*	*XG/GS/AWE controller*	
Midiman	Keyman 49	£89	Keyboard	49 mini-key controller keyboard	
Novation	*MM10-X*	*£160*	*Keyboard*	*2-octave, velocity sensitive, with assignable mod wheel, pitchbend, transpose*	
Peavey	DPM C8	£1799	Keyboard	88 keys, 3 controller wheels, 3.5-inch disk drive, 8 zones, 2 MIDI Ins, 4 MIDI Outs	
Peavey	*DPM C8p*	*£1469*	*Keyboard*	*More affordable version of the DPM-C8*	*Mar 97*
Peavey	PC1600x	£349	Table unit	Programmable, with buttons, sliders, data wheel, 50 presets, 100 scenes	
Q-Logic	*Mac K..AT*	*£110*	*Table unit*	*21-function remote controller for Apple Mac*	
Quasimidi	Cyber 6	£999	Keyboard	61-key controller with special techno effects alongside the usual controls	Mar 96
RED	*VOYAGER 1 Beat Xtractor*	*£250*	*Table unit*	*Audio-to-MIDI synchroniser*	
Roland	A-33	£399	Keyboard	76-note controller	
Roland	*A-90*	*£1699*	*Keyboard*	*Hugely programmable expandable 88-note weighted keyboard*	*May 96*
Roland	AT-30	£5999	Keyboard	Smaller AT keyboard	
Roland	*AT-50*	*£7749*	*Keyboard*	*Smaller version of AT-70*	
Roland	AT-70	£9795	Keyboard	AT-90 with fewer pedals	
Roland	*GI-10*	*£469*	*Module*	*Pitch-to-MIDI guitar interface for use with the GK-2A*	
Roland	GK-2A	£136	Pick-up	Guitar pick-up for Roland guitar synths	
Roland	*KP-24*	*£335*	*Piano mount*	*Sensor for acoustic keyboards for use with RA95*	
Roland	MC-303 Groovebox	£499	Table unit	448 presets, 16-part multi, 300 patterns, 12 drum kits, 8-track RPS, effects	Aug 96
Roland	*MC-505 Groovebox*	*£949*	*Table unit*	*64-voice poly, 512 presets, 16-part multi, 714 patterns, 26 drum kits, 3 effects*	
Roland	MC-50 MkII	£780	Sequencer	Near industry-standard hardware MIDI sequencer	
Roland	*PC160*	*£135*	*Keyboard*	*Simple, no-frills controller*	
Roland	PC-200 Mk II	£165	Keyboard	Updated version of PC-150 with modulation, pitchbend and data entry slider	
Roland	*PK-5*	*£299*	*Pedal board*	*MIDI bass pedal controller*	
Roland	PMA-5	£445	Hand-held	Handy portable sequencer and sound source in one	Jul 96
Roland	*RA-30*	*£499*	*Table unit*	*Auto-arranger*	
Roland	RA-800	£1599	Table unit	Real-time arranger and sound module combined	
Roland	*RA-95*	*£799*	*Table unit*	*Auto-arranger with built-in sounds*	
Samick	KK1	£599	Keyboard	88-note, weighted controller keyboard	
Samick	*KK1L*	*£399*	*Keyboard*	*76-note version of KK1*	
Sunihama	Jamma	£599	Guitar	Guitar-like MIDI controller	Dec 94
Wersi	*MBP1*	*£349*	*Pedal board*	*13-note MIDI pedal board*	
Yamaha	BC2	£39	Breath	Breath controller headset for use with VL synths	
Yamaha	*CBX-K1*	*£99*	*Keyboard*	*Mini, velocity-sensitive keyboard with assignable mod wheel*	*Sep 95*
Yamaha	KX88	£1649	Keyboard	88 weighted keys, four control sliders and pitch-bend and mod wheels	
Yamaha	*MDF3*	*£379*	*Table unit*	*MIDI data filer, uses 3.5-inch disks*	
Yamaha	QY22	£299	Portable	Walkman-style sequencer with built-in sounds	
Yamaha	*QY70*	*£449*	*Portable*	*Silvery compact music sequencer with slick and up to date styles*	

MANUFACTURER	MODEL	PRICE	TYPE	DESCRIPTION	REVIEW
Yamaha	QY300	£599	Table unit	GM sound module, sequencer & auto-accompaniment player in one	Sep 94
Yamaha	*QY700*	*£999*	*Table unit*	*48 tracks, sequencer, XG sound generator, 3 effects processors, MIDI In/Out x2*	
Yamaha	WX11	£359	Wind	MIDI wind controller, updates old WX7	
Zildjian	*Kat dk10*	*£549*	*Drum pads*	*10-pad unit with lots of programmability*	

MIDI/CV CONVERTERS

MANUFACTURER	MODEL	PRICE	CHANNELS	DESCRIPTION	REVIEW
Doepfer	MAUSI	£99	tbc	MIDI-to-CV/sync interface	
Doepfer	*MCV4*	*£69*	*tbc*	*MIDI-to-CV interface*	
Doepfer	MSY2	£59	tbc	MIDI-to-Sync 24 interface	
EES	*MIDI-CV7*	*£449*	*7*	*CV and gate outs, 1V/octave and Hz/V options, DIN Sync*	
Kenton	Pro-2	£190	2	MIDI-to-CV converter	
Kenton	*Pro-2 Hz*	*£220*	*2*	*Pro-2 for synths running on Hz sync (such as Korgs and Moogs)*	
Kenton	Pro-2000	£230	5	CV and gate outs, 1V/octave and Hz/V options, DIN Sync, DCB, MIDI filter	Jun 97
Kenton	*Pro-4*	*£500*	*10*	*Multi-channel MIDI-to-CV converter with 4 channel Hz/V card*	*Oct 94*
Kenton	Pro-DCB	£125	1	MIDI-to-DCB converter	Mar 97
Kenton	*Pro-Kadi*	*£125*	*1*	*MIDI trigger unit, 13 configurations, DIN Sync 24 socket*	
Kenton	Pro-Solo	£100	1	MIDI-to-CV converter	Oct 95
Philip Rees	*Little MCV*	*£76*	*1*	*MIDI-to-CV converter*	*Feb 97*
Philip Rees	MDS	£70	1	MIDI-to-Sync 24 converter	

MIDI GENERAL

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
Doepfer	MMR4/4	£99	tbc	MIDI merge/Thru	
JL Cooper	*MSB V2*	*£399*	*8 In, 8 Out*	*MIDI patch bay and processor*	
JL Cooper	Nexus	£169	2 In, 8 Out	Programmable MIDI patch bay with transpose and mergable Ins	
JL Cooper	*Nexus*	*£109*	*3 In, 8 Out*	*MIDI patch bay*	
JL Cooper	Synapse	£1199	16 In, 20 Out	MIDI patch bay with 3-way merge	
MIDI Solutions	*2-Way Merge*	*£59*	*tbc*	*2-way MIDI merge unit*	
MIDI Solutions	Footswitch	£54	tbc	Converts footswitch actions to MIDI messages	
MIDI Solutions	*Mapper*	*£69*	*tbc*	*Remaps MIDI messages*	
MIDI Solutions	Quad Merge	£99	tbc	4-into-1 MIDI merge	
MIDI Solutions	*Relay*	*£69*	*tbc*	*MIDI-to-audio switch*	
Midiman	MidiMerge6	£9	2 In, 2 Out	Self-powered MIDI merge box	
Midiman	*MidiThru*	*£29*	*1 In, 4 Out*	*MIDI splitter and Thru box*	
Midiman	SmartSync	£89	tbc	Smart Song Pointer/FSK/MIDI sync-box	
Midiman	*Syncman*	*£169*	*tbc*	*SMPTE-to-DTL/MTC synchroniser*	
Midiman	Syncman Plus	£169	tbc	SMPTE/SPP/DTL/MTC sync-box	
Midiman	*Syncman Pro*	*£299*	*tbc*	*Rackmount SMPTE box with LED*	
Midiman	Trans MIDI	£399	tbc	Wireless MIDI system; piggy-backs onto wireless mic systems	
Midiman	*Video Syncman*	*£449*	*tbc*	*VITC/LTC/MTC sync box and code translator*	
Nobels	MV-C	£121	tbc	MIDI volume controller hardware	
PC Services	*Micro-merge*	*£82*	*2 In, 2 Out*	*Self-powered MIDI merge*	
PC Services	Micro-thru	£23	1 In, 3 Out	Self-powered MIDI Thru box	
PC Services	*MIDI Switch*	*£34*	*tbc*	*4-way MIDI switch box*	
PC Services	MIDI Thru	£34	tbc	6-way MIDI Thru box	
Philip Rees	*2S*	*£13*	*2 In, 1 Out*	*MIDI selector*	
Philip Rees	3B	£30	3 In, 2 Out	MIDI selector	
Philip Rees	*3M*	*£99*	*3 In, 1 Out*	*MIDI merge unit*	
Philip Rees	5S	£30	5 In, 1 Out	MIDI selector	
Philip Rees	*9S*	*£13*	*9 in, 1 Out*	*MIDI selector*	
Philip Rees	V3	£13	1 In, 3 Out	MIDI Thru unit	
Philip Rees	*V4*	*£20*	*1 In, 4 Out*	MIDI Thru unit	
Philip Rees	V8	£36	2 In, 2x4 Out	MIDI Thru unit, inc mains adaptor	
Philip Rees	*V10*	*£40*	*1 In, 10 Out*	MIDI Thru unit	

MAC

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
Altech	MIDIFace LX	£50	1 In, 3 Out	Serial port interface	
JL Cooper	*Mac Nexus*	*£75*	*1 In, 3 Out*		
JL Cooper	Sync Link	£219	2 In, 2 Out		
KCCM	*MIDIEdge*	*£45*	*1 In, 1 Out*		
MacMIDI	MacMIDI 2s	£420	2 In, 6 Out	32 MIDI channels, SMPTE, MTC	
MacMIDI	*MacMIDI1*	*£89*	*1 In, 3 Out*		
Midiman	Mac Syncman	£169	2 In, 6 Out	32 channels, SMPTE; stand-alone SMPTE box	
Midiman	*MacMan*	*£45*	*1 In, 3 Out*	*Pass-Thru*	
Midiman	MiniMacMan	£35	1 In, 3 Out	Compact interface needing no power supply	
MotU	*FastLane*	*£59*	*1 In, 3 Out*	*Thru switch for working without Mac*	
MotU	MIDI Timepiece AV	£649	8 In, 8 Out	8x8 interface with SMPTE, LTC video, ADAT Digidesign Superclock sync	Apr 97
MotU	*Pocket Express*	*£219*	*2 In, 4 Out*	*32-channel interface with SMPTE*	
MusicQuest	2 Port SE	£200	2 In, 4 Out	Filters message	
MusicQuest	*2 Port SX*	*£400*	*8 In, 8 Out*	*MIDI interface with SMPTE*	
MusicQuest	MIDIstrip	£49	1 In, 3 Out	Includes 5-foot serial cable	
MusicQuest	*MQX-32 M*	*£230*	*2 In, 2 Out*	*32 MIDI channels and SMPTE/MTC facility*	
Opcode	MIDI Translator II	£70	1 In, 3 Out	Switchable Thru	
Opcode	*MIDI Translator Pro*	*£130*	*2 In, 6 Out*	*Switchable Thru*	
Opcode	MIDI Translator Pro Sync	£230	2 In, 6 Out	32 channels, switchable Thru, SMPTE support	
Opcode	*Studio 64X*	*£269*	*4 in, 4 out,*	*MIDI interface, patchbay, SMPTE*	*Dec 97*
Opcode	Studio 3	£300	2 In, 6 Out	19-inch rackmount, SMPTE support	
Opcode	*Studio 4*	*£550*	*8 In, 8 Out*	*19-inch rackmount, SMPTE support*	
Opcode	Studio 5 LX	£1100	15 In, 15 Out	19-inch rackmount, SMPTE support	
Steinberg	*Micro Mac*	*£55*	*1 In, 1 Out*	*Basic MIDI interface*	

PC

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
Creative Labs	MIDI Adapter	£22	1 In, 1 Out	Adapter for SoundBlaster cards	
EES	*PC-MIDI 1/4*	*£99*	*1 in, 4 out*	*Parallel port interface, 64 MIDI channels*	
KCCM	MIDIEdge	£59	1 In, 1 Out	Expandable MIDI interface card	
KCCM	*MIDIEdge*	*£129*	*2 In, 4 Out*	*Expandable MIDI interface card*	
KCCM	MIDILink	£69	1 In, 1 Out	Serial port interface	
Midiman	*MM401*	*£59*	*tbc*	*Full MPU-401 interface card*	
Midiman	PortMan 2x4	£129	2 In, 4 Out	Parallel port interface	
Midiman	*PortMan PC/P*	*£89*	*tbc*	*MIDI parallel port interface for laptops and portables; includes driver*	
Midiman	PortMan PC/S	£89	tbc	Serial port interface for laptop and portable computers, PS/2-compatible	
Midiman	*Soundcard Cable/Module*	*£25*	*tbc*	*Soundcard MIDI adapter (4-foot male or 1-foot female)*	
Midiman	Video Producer	£249	tbc	VITC sync reader/writer, syncs to PC via MTC	
Midiman	*Video Studio*	*£279*	*tbc*	*Video Producer packaged with Samplitude software*	
Midiman	WinMan 1x1	£49	1 In, 1 Out	Includes Windows drivers	
Midiman	*WinMan 2x2*	*£79*	*2 In, 2 Out*	*Internal interface with Windows drivers*	
Midiman	WinMan 4x4S	£219	4 In, 4 Out	SMPTE, Windows drivers	
MotU	*MIDI Timepiece AV*	*£649*	*8 In, 8 Out*	*8x8 interface with SMPTE, LTC video, ADAT Digidesign Superclock sync*	*Apr 97*
MotU	PC-MIDI Flyer	£99	2 In, 2 Out	32-channel parallel port interface	
MotU	*Pocket Express*	*£219*	*2 In, 4 Out*	*Parallel port interface with SMPTE*	
Music PC	MPC401MkII	£65	1 In, 1 Out	Basic MPU-401-type MIDI interface, with WaveBlaster socket	
MusicQuest	*MIDI Engine Note/1*	*£100*	*1 In, 1 Out*	*Parallel port MIDI interface*	
MusicQuest	PC MIDI card	£80	tbc	MPU-401 card	
Opcode	*Studio 64X*	*£269*	*4 In, 4 Out*	*MIDI interface/patchbay/SMPTE*	*Dec 97*
PC Services	MPC16	£53	1 In, 1 Out	Interface card with Windows drivers	
PC Services	*SC16*	*£30*	*1 In, 3 Out*	*Plug-in MIDI expander for SoundBlaster-compatible PCs*	
PC Services	SP16	£58	1 In, 3 Out	Serial port interface with Windows drivers	
Steinberg	*SMPII*	*£799*	*tbc*	*SMPTE/MIDI interface; requires DC/PC PC drive card*	

ATARI

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
Cimple Solutions	Extraports	£70	1 In, 3 Out	48 more MIDI channels via modem port (ST only)	
Heavenly Music	*STM*	*£13*	-	*Extra MIDI Out for modem port*	
Steinberg	Midex+	£475	2 In, 4 Out	Interface cartridge with SMPTE and 4 key slots	
Steinberg	*SMPII*	*£799*	*tbc*	*Rackmount interface and SMPTE processor*	
Steinberg	Studio Module	£159	1 In, 3 Out	For ST or Falcon	

ANALOGUE/DIGITAL CONVERTERS

MANUFACTURER	MODEL	PRICE	FORMAT	DESCRIPTION	REVIEW
Apogee	AD-1000	£2697	A/D	Stereo 20-bit A/D converter standard version	
Apogee	*AD-1000 Platinum*	*£3519*	*A/D*	*As AD-1000, but with UV22 and ADAT/DA-88 interfacing options*	
Apogee	AD-8000	£4524	A/D D/A	8-channel 24-bit converter and processor	Oct 98
Apogee	*AD-8000-2DA*	*£390*	*D/A*	*2-channel plug-in expansion card*	
Apogee	*AD-8000-8DA*	£1287	D/A	*8-channel plug-in expansion card*	
Apogee	*DA-1000E-20*	*£2291*	*D/A*	*Stereo 20-bit converter*	
Apogee	FC-8	£449	D/D	8-channel ADAT/DA-88 converter	
Fostex	*FSC-1*	*£969*	*D/D*	*Converts AES/EBU & S/PDIF signals to 32, 44.056, 44.1 and 48kHz*	
Frontier	Zulu	£548	A/D D/A	4 analogue ins, 8 analogue outs, MIDI	
Langevin	*ADC-20*	*£1287*	*A/D*	*All-discrete A/D 20-bit converter*	
Langevin	DAC-20	£1287	D/A	All-discrete D/A 20-bit converter	
Manley	*ADC-20*	*£5517*	*A/D*	*Reference tube A/D 20-bit converter*	
Manley	DAC-20	£6257	D/A	Reference tube D/A 20-bit converter	
Midiman	*C02*	*£45*	*D/D*	*Converts S/PDIF signals from optical to coaxial and vice versa*	
Midiman	Flying Cow	£109	A/D	Stereo analogue jack inputs to S/PDIF outputs	Jun 98
Midiman	*Flying Cow*	*£109*	*D/A*	*S/PDIF inputs to stereo analogue jack outputs*	*Jun 98*
Midiman	Flying Calf	£349	A/D D/A	Stereo analogue XLRs, AES/EBU or S/PDIF I/O at 32, 44.1 or 48kHz	Jun 98
MotU	*2408*	*£995*	*A/D D/A*	*8 analogue, 24 Alesis, 24Tascam, 2 S/PDIF I/Os, 16-/24-bit, 44.1/48kHz, Mac or Win*	
MusicNet	AD24	£499	A/D	8 analogue XLRs to ADAT and 24-bit optical	Oct 98
MusicNet	*DA24*	*£399*	*D/A*	*ADAT and 24-bit optical to 8 analogue XLRs*	*Oct 98*

BUYING ADVICE

Where to buy

■ Mail-order companies may offer the best price, but don't count on after-sales service.

■ Local music shops are good for trying instruments out, but they may not have an expert on more specialised products.

■ Pro-audio specialists should offer expert advice on the most technical of gear. A good after-sales service should be provided.

Planning your purchase

■ Check what is included in the price: cables, delivery, VAT? Adverts must by law say if VAT is not included. If it doesn't then VAT is included – check the fine print.

■ If you're buying by mail, check price and availability. Just because a product is advertised doesn't mean it is available or in stock. Check the company's policy in case you have a problem, and get a definite delivery date.

■ If buying in person, check everything works before leaving the shop. If buying by post, check the goods when they arrive. If you don't have time, mark the delivery note "goods not inspected". Don't use the product if you're not happy with it.

■ Whether you buy from a shop or by mail, the laws states that a product must be:

1. "Of satisfactory quality" (i.e it works)
2. "As described" – this applies whether in an ad or in person (and also from a private seller)
3. Fit for the purpose for which it was sold or which you specified.

■ Otherwise you are entitled to a full refund, or the replacement of the product.

How to complain

■ If you're not happy with your purchase, contact the dealer and explain the problem. If it isn't solved describe your problem in writing and explain how you want it resolved. Allow the dealer a couple of weeks to respond.

■ If you're still not happy, you may need to take legal action. Seek advice from a solicitor, or from the Citizens Advice Bureau, Trading Standards Office, Office of Fair Trading, or County Court.

STEREO RECORDERS

CASSETTE: Still the most widely used consumer recording format, analogue audio cassette can provide acceptable results as a mastering format when high-quality machines and media are used. Models aimed at the studio and musician are generally of a higher quality than consumer models and will subsequently give better results.

CD-R: Recordable CD is a format growing in popularity, largely due to the price of recorders coming down. There are two types of CD-R available: stand-alone hardware models, and SCSI-based drives that connect to your computer. Blank CD-Rs are getting cheaper, too, with time/price currently at around 2.5 to 4p per minute.

DAT: Digital Audio Tape is still the mastering format of choice for most studios, providing (as it does) excellent sound quality and relatively cheap media. Audio quality does not vary wildly between basic models and 'professional' models, though with the more expensive DATs you can expect balanced I/O, digital I/O, and a fully-featured remote.

MINIDISC: This format does not give as good quality audio as DAT, but it is a cheap way into digital mastering – consumer models typically cost several hundred pounds. The media itself isn't too expensive and can be overwritten many times.

CASSETTE

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Denon	DN-720R	£450	2 heads, vari-speed, phono I/O, Dolby B/C	
Denon	*DN-740R*	*£550*	*2 heads, vari-speed, phono I/O, Dolby B/C, double deck*	
Denon	DN-770R	£499	2 heads, vari-speed, phono I/O, Dolby B/C, double deck	
Denon	*DN-790R*	*£700*	*3 heads, vari-speed, balanced XLR/phono I/O, Dolby B/C/S*	
Denon	DRM-650S	£230	2 heads, phono I/O, Dolby B/C/S	
Denon	*DRM-740*	*£270*	*3 heads, phono I/O, Dolby B/C*	
Denon	DRS-640	£206	2 heads, phono I/O, Dolby B/C	
Denon	*DRS-810*	*£310*	*3 heads, phono I/O, Dolby B/C*	
Sony	WMD-6C	£299	Top-spec, professional recording Walkman	
Tascam	*102MkII*	*£479*	*Pro-quality cassette mastering deck*	
Tascam	202MkII	£799	Pro-quality double cassette mastering deck	

CD-R

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Fostex	CR200	£1522	32/44.1/48kHz inputs, AES/EBU, S/PDIF coaxial and optical I/O	
HHB	*CDR-800*	*£1299*	*32/44.1/48kHz inputs, digital synchronous dubbing mode*	
Marantz	CDR610	£3989	Analogue and digital I/O	
Marantz	*CDR630*	*£749*	*CD-R/CD-RW, analogue XLR/phono I/O, S/PDIF & optical I/O*	*Nov 98*
Otari	CDR-18	£1287	2U, with balanced XLRs, unbalanced phonos, AES/EBU, optical or S/PDIF inputs	Jun 98
Philips	*CDR 870*	*£500*	*CD recorder that can also use rewriteable discs*	*Jan 98*
Pioneer	PDR-04	£699	Analogue and digital I/O, but writes SCMS	
Pioneer	*PDR-05*	*£1299*	*Analogue and digital I/O, but writes SCMS*	*Nov 96*
Plasmon	CD4240	£586	Internal CD-ROM burner	Oct 96
Plasmon	*CD4240*	*£870*	*External CD-ROM burner, SCSI card, software*	*Oct 96*
Traxdata	CDR 4120 Pro	£tbc	4x record/12x playback with internal or external options; requires PC	
Traxdata	*TraxCopier*	*£7044*	*CR-R and automated CD duplicator*	*Sep 98*

DAT

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Fostex	D-5	£799	2 heads, 32–48kHz sample rate, no SCMS, analogue XLR I/O, AES/EBU & S/PDIF I/O	Mar 97
Fostex	*D-15*	*£2932*	*2 heads, 44.1/48kHz sample rates, analogue XLR I/O, AES/EBU & S/PDIF I/O*	
Fostex	D-25	£4929	4 heads, 44.1/48kHz sample rates, analogue XLR I/O, AES/EBU I/O, SMPTE	
Fostex	*D-30*	*£6809*	4 heads, 44.1/48kHz sample rates, analogue XLR I/O, AES/EBU I/O, SMPTE	
Fostex	PD-4 v2	£5164	4 heads, 44.1–48.048kHz sample rates, SMPTE, speaker, phantom power, portable	
HHB	*PDR1000*	*£3401*	*4 heads, portable*	
Panasonic	SV-3800	£1099	2 head, 44.1/48kHz sample rates, analogue/digital I/O, error display	Mar 97
Pioneer	*D-05*	*£899*	*2 head*	*Mar 97*
Sony	DTC-670	£799	Semi-pro DAT	
Sony	*DTC-A6*	*£799*	*2 head, 32–48kHz sample rates, SCMS*	*Jun 97*
Sony	DTC-A8	£949	2 head, 32–48kHz sample rates, SCMS	Jun 97
Sony	*DTC-A9*	*£1169*	*2 head, 32–48kHz sample rates, XLR in/out, SCMS*	*Jun 97*
Sony	DTC-D8	£599	Mic input, 44.1kHz analogue in, 1-bit A/D and D/A, digital I/O, portable	Mar 97
Sony	*PCM-2300*	*£1481*	*2 heads, balanced I/O*	
Sony	PCM-2600	£1469	2 heads	
Sony	*PCM-2700A*	*£2095*	*4 heads*	
Sony	PCM-R300	£699	32–48kHz sample rates, error rate display, remote	
Sony	*PCM-R500*	*£1169*	*32–48kHz sample rates, AES/EBU I/O*	*Oct 97*
Sony	PCM-R700	£1322	4 heads, 32–48kHz sample rates, AES/EBU I/O	Oct 97
Sony	*PCM-M1*	*£640*	*32–48kHz sample rates, SCMS, portable*	*Aug 98*
Tascam	DA-20 MkII	£699	44.1kHz sample rate	Mar 97
Tascam	*DA-30 MkII*	*£1299*	*44.1kHz analogue in, AES/EBU I/O, balanced analogue out, shuttle wheel*	*Mar 97*
Tascam	DA-60 MkII	£tbc	Advanced timecode DAT	
Tascam	*DA-302*	*£1499*	*2 DAT recorders in one unit, for simultaneous digital cloning and duplication*	*Apr 98*
Tascam	DA-P1	£1499	Professional portable DAT recorder with XLRs and 48V phantom power	

MINIDISC

MANUFACTURER	MODEL	PRICE	DESCRIPTION	REVIEW
Denon	DMD-1300	£501	44.1kHz with sample rate conversion, analogue/optical I/O	
Denon	*DMP-R70*	*£tbc*	*44.1kHz with sample rate conversion, analogue/optical stereo mini jack I/O*	
Denon	DN-80R	£2350	44.1kHz with sample rate conversion, analogue XLRs, AES/EBU I/O, portable	
Denon	*DN-M1050R*	*£1410*	*44.1kHz with sample rate conversion, analogue XLR/phono I/O, AES/EBU & S/PDIF I/O*	
Sony	MDS-E55	£529	20-bit conversion, latest generation ATRAC encoding, editing	
Sony	*MZR-30*	*£300*	*Budget entry-level MD recorder*	
Tascam	MD-301	£699	44.1kHz with sample rate conversion, analogue phono I/O, digital optical I/O	May 98
Tascam	*MD-501*	*£899*	*44.1kHz with sample rate conversion, analogue XLR/phono I/O, digital optical I/O*	*May 98*
Tascam	MD-801P	£tbc	Playback and editing oly version of MD-801R	
Tascam	*MD-801R*	*£tbc*	44.1kHz with sample rate conversion, analogue XLR/phono I/O, digital optical I/O	

THE BEST TOYS ARE IN T3

To subscribe for just £4.50 call 01458 271121

SPECIAL TRIAL OFFER – 3 ISSUES FOR ONLY £4.50

● Save £1.20 an issue on the cover price ● Each issue delivered free to your home

Title (Mr/Mrs/Miss/Ms) ..... Initials ..... Surname .....

Address .....

Postcode ..... Daytime telephone .....

Sex: M ☐ F ☐ Date of birth .....

I would like to pay by ☐ Cheque (payable to Future Publishing) ☐ Visa ☐ Mastercard

Card number ..... Expiry date .....

Date ..... Signature .....

Offer ends 30 November 1998. Valid in the UK only.

Return to: T3 Subscriptions, Freepost (BS4900), Somerton, Somerset TA11 6BR

ORDER HOTLINE: 01458 271121

Please quote this code when telephoning : MIX1298

THE Mix FREE READER ADS

FREE ADS

There are three ways you can advertise your equipment in *The Mix*:

1. POST – cut out and fill in the coupon and send to: Reader Ads, *The Mix*, Future Publishing, 30 Monmouth St, Bath BA1 2BW

2. FAX – fax us your ad on 01225 732353

3. EMAIL – send an email with the subject "*The Mix* free ads" to: lisa.savage@futurenet.co.uk

When sending an advert please remember to state which category you wish the ad to appear in and include full contact details.

KEYBOARDS

E-mu E-Synth rackmount sampler, synth, workstation, effects, FM 93%, boxed, manuals, mint condition, less than six months old, 16Mb RAM, sample CDs included £2,000 ono. Tel Jon on 0171 714 8481 days or 0181 760 9833 evenings

Ensoniq ASR10 keyboard, complete digital recording studio in one instrument, eg, sampling, effects, sequencing, etc. Fully expanded to 16Mb with SCSI fitted, you'll be stealing it off me for £1,500 ono. Tel 01226 390090

Fatar Studio SL-880 seven-octave piano, weighted, master keyboard £350. Also Alesis NanoPiano 64-voice piano module £175. Both mint, prefer to sell together, no offers. Tel 01536 410690

Korg 01/WFD workstation with manual, disks, case, mint condition, reluctant sale £700 ono. Tel 01935 862266 (Somerset)

Korg M1 excellent condition, home use only, manuals, sound cards £425. Tel Rudi on 01227 272455 (Kent)

Korg M1 with multi-functional foot pedal, very good condition, boxed with manual and all accessories £450 ono. Tel Richard on 01202 873708

Korg M1 workstation, excellent condition, great sounds, memory cards, manual £580. Tel Steve on 01902 418467 (West Midlands) or 07970 237762

Korg MonoPoly analogue synth, mint condition, with manual £450. Tel Lee on 01274 602621 or 0976 302669

Korg N5 synth brand new, boxed with software, no reasonable offer refused, plus Yamaha W7 expansion boards, dance and vintage £20 plus postage. Tel Ian on 01207 509866

Korg N5 synth six months old, home use only, immaculate £400 ono. Tel Robert on 01274 603322 (Bradford)

Korg Poly 61M cult classic, digitally controlled analogue synth, DCOs, VCF, VCA, memories, MIDI, etc, six-voice polyphony, SSM chips, ex ELO, superb condition £200 ono. Tel Simon on 07970 823990

Korg Poly 800 analogue synth, MIDI in/out, manual £150. Tel 01795 661502 (Kent)

Korg Trinity Plus never played publicly, hardly used, MIDI disks included £1,000. Tel Oliver on 01396 722609

Korg Trinity Plus with playback sampler and Prophecy options fitted, unused condition with extra sounds disks and librarian software £1,250 ono. Tel Alex on 01695 623968 (NW Lancashire)

Korg Trinity Pro 76-key workstation, V2 operating system, excellent condition, boxed, all manuals £1,300 ono. Tel David on 01493 843609 (Great Yarmouth)

Korg Trinity Pro 76-note fully expanded workstation including all manuals, disks and Quiklok single-tier X-stand, eight months old, perfect condition £2,250. Tel 0171 253 3748 (answerphone)

Kurzweil K2000R sampler option, as new with dance emulator £1,600 ono. Tel Matt on 0181 761 5728

Kurzweil K2500X 88-note workstation, includes 8Mb RAM (expandable to 128Mb), flightcase, large library, latest operating system including KB3 virtual drawbar mode, excellent condition, cost over £4,500, sell for £2,795 ono. Tel 01278 794110 or 07970 611573

Logan String Machine great 70s' string sounds plus fully poly, as new, never, gigged £200. Tel Brian on 0181 941 4893 (near Heathrow)

OSCar REV7 MIDI excellent condition, original owner, light home use only, manual, factory sounds saved on data cassette, sonically very powerful, unlimited waveform creation £750. Tel 0161 861 7261 (Manchester)

Roland JP-8000 less than six months old, boxed with manuals, mint condition, fantastic sounds £800 ono. Tel Jon on 0171 714 8481 days or 0181 760 94833 evenings

Roland Juno 106 analogue synth, excellent condition £425 no offers. Tel 01483 202879

Roland Juno 106 excellent condition with flightcase £500. Tel James on 0117 941 2812 (Bristol)

Roland Jupiter 4 classic analogue synth, good condition. Tel 01223 501407 (Cambridge)

Roland Jupiter 8 manual and data tape, just serviced, best monster synth ever made, near mint condition, best in the country £1,000 ono or swap for expanded VS-880. Tel Plank on 0161 661 7090

Roland Jupiter 8 with manual and data tape, just serviced, 16MHz clock upgrade, best in country, near mint condition £1,100 ono or swap for V-expanded VS-880, effects board and drives. Tel Plank on 0161 661 7090

Roland JV-1080 free orchestral and pop expansion card, manual, mint £650 or swap for E-mu Emax2 stereo sampler keyboard with manual and sound disk, delivered by air courier to you, guaranteed. Tel (Singapore) 65 9742 7990 or e-mail: deskjet100@yahoo.com

Roland JV-2080 comes with Bass&Drums card installed, also Dance Culture Volumes 1 & 2 plus data card, immaculate condition, boxed with manuals £1,200. Tel Dan on 01725 552351 evenings only

Roland JX-3P classic MIDI analogue synth, home use only £300. Tel Chinn on 01582 482619

MORE ADS OVER THE PAGE

(Luton)

Roland JX-3P PG-200 programmer, X-stand, manual, good condition £350. Tel Steve on 01753 814230 evenings only

Roland SH-1000 analogue synth, amazing squeals and burps, hardly been used since it was made, original hard case, immaculate, will swap for SH-09 or SH-101 or sell for £195. Tel Richard on 01792 844602 (Swansea)

Roland W-30 flightcase, fully serviced, immaculate, huge library, manuals, reluctant sale, got no room, swap for Korg 01W/R but anything considered, I'll give free computer. Tel Hadleigh on 01322 351413 after 6pm

Roland XP-60 with Hip Hop board, three months old, hardly used £1,100 ono. Tel 01562 861821 evenings

Roland XP-80 with 16-track sequencer, programmable arpeggiator, 64-voice polyphony, excellent synth, perfect condition, hardly used, as new, quick sale needed hence £800 ono. Tel Tony on 01202 690306 or 0961 990478

Solina String Ensemble classic string synth, mint condition, recently serviced, includes original music stand, volume pedal, circuit diagrams, can be MIDI'd £350. Tel Ross on 01634 841600 (Kent area), can deliver

Studio Electronics ATC1 fantastic MiniMoog sounds, as new £380. Tel Andy on 01844 215431 or 01296 655764 or e-mail: kinchmusic@aol.com

Yamaha CS1x as new, boxed, excellent sounds £350 ono. Tel 01327 704234 (Northants) evenings

Yamaha CS1x control synth, great sounds, six months old, boxed £450 ono. Tel Luke on 0115 946 3077

Yamaha CS1x perfect condition with box and manuals, seven months old, includes stand, under warranty £400 ono. Tel Karl on 01465 251829

Yamaha Deep Bass Nine with manuals, the deepest 303 sounds £175. Tel 01753 890223 or 07970 793933

Yamaha DX21 any offers around £150-200. Tel Paul on 0181 500 0738

Yamaha P300 stage piano, 88 weighted keys, amazing quality piano samples, effects, EQ, four pedal inputs, two wheels, two sliders, also ideal as mother keyboard, built-in monitor speakers, very good condition, boxed with manual £1,400. Tel Ed on 0161 928 0533

Yamaha PSR620 141 voices, 100 styles, 45 effects, FM, disk drive, cartridge, high-quality sound, very good condition, includes extra styles on disk £400. Tel Jon on 01562 637801 (West Midlands)

Yamaha SY55 synthesizer, 16-part multitimbral, eight-track sequencer, built-in effects £250 ono. Tel 0141 576 4438

Yamaha SY85 with sample memory, fully upgraded, excellent condition £600. Tel 01753 890223 or 07970 793933

Yamaha SY85 workstation, expanded 2.5Mb sample RAM, loads of loops on disk, with Atari ST and software, as new, bargain £550. Tel Dave on 0161 308 3202 (Manchester area)

SAMPLERS

Akai S20 sampler, boxed, as new, 17Mb upgrade £300. Tel Nigel on 0181 675 2263 evenings or 0956 970795 any time

Akai S20 sampler, fully expanded to 17Mb, sample disks included £300. Tel 01922 683396 (Walsall)

Akai S950 boxed with manuals, mint condition £300. Tel Andrew on 0370 9485153 6-8pm only

Akai S950 fully upgraded memory, eight separate outputs, 12-bit digital good old workhorse, perfect working order, manual, boxed £550 (Swindon area)

Akai S1100 10Mb, just serviced, new D/D, home use only, boxed as new £750. Tel Chinn on 01582 582619 (Luton)

Akai S1100 18Mb, SCSI effect board and digital out, ten outputs, SyQuest 44Mb drive and ten cartridges with library, boxed with manuals, bargain £750. Tel Tony on 0181 391 4201

Akai S2000 18Mb, excellent condition, SyQuest EZ135 removable hard drive and three 135Mb disks full of samples, also three Time+Space CDs, boxed, manuals, cables, etc £550 everything. Tel Tom on 01334 463123 (Manchester/St Andrews) day time

Akai S2800 sampler, timestretch, 50 effects, EQ card, boxed, manual, home use only, owned since new, bargain £700 ono. Tel John on 01787 478492

Akai S3000XL 10Mb with Zip drive, comes with a variety of sample CDs and disks, immaculate condition with box and manuals £1,300. Tel Dan on 01725 552351 evenings only

E-mu e4K 128Mb RAM, top condition £2,500. Tel (Singapore) 65 9742 7990 or e-mail: deskjet100@yahoo.com or paris@cyberway.com.sg

E-mu e4K sampler, E-mu E-Synth dance workstation, 2,000 internal sounds, Orbit, Planet Phatt 128-voice polyphony, 23-bit effects, ReSample, stretch, 128Mb RAM, 76-key semi-weighted, eight-16 outs, digital in/out, 64 six-pole filters, 48-track sequencer, two months old, cost £3,300, £2,700 ono. Tel 01903 215795

E-mu e6400 18Mb, six CD-ROMs, four months old, as brand new condition, boxed, manuals £1,395. Tel Tony on 01684 565217

E-mu ESI32 8Mb, boxed, with manual, disks £500 no offers. Tel Adrian on 0181 341 0634 (London)

E-mu ESI32 with Turbo option (six extra outs, digital in/out, effects, 21 filters), SCSI, EZ135 drive with three diskettes and over 150Mb of samples, audio and MIDI leads. Tel 0117 924 1936

E-mu ESI4000 sampler, 16Mb, excellent condition, hardly used £1,100 ono. Tel Luke on 0115 946 3077

Ensoniq EPS sampler, ten outputs, perfect condition, loads of disks £600 ono. Keyboard and mixer also for sale. Tel Mark on 01256 844061 after 5.30pm

Korg DSS1 featured in *FM57 Retro*, absolutely immaculate condition, boxed, manual, sample library, original price £2,500, best offer over £500 secures. Tel Mike on 01424 85149 or e-mail: 100046.2747@compuserve.com

Peavey SP/SX 16-bit sampler, SCSI, lots of diskettes, plus Zip drive and six cartridges, boxed with manuals £660. Tel Rob on 01403 272098 (Sussex)

PVSX11 16-bit stereo digital sampler, SCSI, MIDI, boxed, new, with manual £150. Tel 01923 445262

Roland JS-30 sampling workstation, very good condition, manuals and all connections £250 ono. Tel Matt on 01628 743401 (Newmarket) evenings

Roland MS-1 portable sampler, includes box, manuals, sample CD, 6Mb flash RAM card memory expansion, immaculate £120. Tel 0171 253 3748 (answerphone)

Roland S-760 sampler, 18Mb, CD-ROM, Zip, Cart and digital expansion, Sony monitor, sample library, immaculate condition £1,500. Tel Tig on 0181 883 0258 (London N10)

SEQUENCERS

Roland MT-100 five-track digital sequencer, sound module with disk drive, disks, 100s of sounds, mint condition, manual, PSU, flightcase £150 or swap for Zoom 1204, SG01V or P50M. Will post. Tel 01639 768103 (South Wales)

DRUM MACHINES

Roland CR-78 she comes in a wooden box! Tel 01273 684069 (Brighton) or 0956 222133

Roland R-8 with dance card: 909 and CR-78 sounds £50. Tel Gavin on 0141 341 0096

Roland R-70 drum machine, 909, 808, 606, CR78 sounds, all fully editable, boxed, manuals, as new £220. RAM card also available. Tel Andy on 01538 755429 (North Staffs area) evenings

Roland TR-606 immaculate with manual and carry case, in original box £200 ono. Tel 01242 523304

Yamaha RY30 drum machine with Atari software, offers. Tel 0113 252 8676

COMPUTERS

Amiga 1200 6Mb, 340Mb hard drive, includes sequencers, sampler, MIDI interface, over 20 games, hundreds of disks and joystick £120 ono. Tel Steve on 01703 330380 or 01703 738807

Apple Mac Performa 5200, Power Mac with modem, three-way MIDIMacMan, 40Mb RAM, 800Mb hard drive, *Cubase Audio VST, ReCycle, ReBirth, Time Bandit, Photoshop 4, Illustrator 7, Quark XPress*, much more £600 ono. Tel 07771 928755 (Essex)

Apple Mac Performa 5200/75 Power Mac 603, 24Mb RAM, 800Mb hard drive, 15-inch monitor, CD-ROM, keyboard, mouse, 16-bit audio in out, remote control, loads of software including sound effects and *Concertware*, excellent for music £450. Tel Miles Mälgand on 0171 493 1275 days or 0181 737 3731 evenings

Atari 520 STE with hi-res monitor, includes *Cubase* £150 ono. Tel Luke on 0115 946 3077

Atari 520 STFM great computer, ideal for any music set-up, boxed as new, with MIDI sequencer, Yamaha synth editor and various

other software included, excellent condition with labels £200 ono. Tel Paul on 01784 740833 evenings

Atari 1040 STE with hi-res monitor and *Cubase V2* £170. Tel Steve on 01553 6474076

Atari 1040 STFM plus *Cubase V3* and hi-res monitor £100. Tel Andrew on 0370 985153 6-8pm only

Atari Falcon 4Mb, hi-res SM124 monitor, *Cubase Score, X-Zero*, all with dongles, NVDI, blow-up screen expander £250 ono. Tel Rudi on 01227 272455 (Kent)

Atari ST sequencer set-up with hi-res monitor, leads, accessories, used with *Cubase, Notator*, ready to plug into keyboard £150 ono. Also Mega STE floptical drive, 21Mb, disks £80 ono. Tel 01884 257487

Atari STE 4Mb, monitor, *Cubase, Sweet 16, Band-In-A Box*, 750+ MIDI files (mostly rock and pop), new mouse, absolutely immaculate £225 or exchange (plus cash) for QY70, MGS64. Can post. Tel 01639 768103 (South Wales)

PC166 Pentium MMX, 32Mb, 2.1 Gb hard drive, 16-speed CD-ROM, AWE64 Gold, sound card, shielded speakers, Alps keyboard, 15-inch Samsung monitor and Intel TC430 motherboard, 512 cache £780. Tel 01455 613401

PC 485 Deskpro, 20Mb RAM, 500Mb hard drive, 12-speed CD-ROM, SVGA 14-inch monitor, all accessories, *Windows 95, Cubase Score V3.05, Cakewalk Pro Audio* and more, 80 MIDI channels, Portman 2x4 MIDI interface, soundcard and speakers, very good condition £370 ono [no contact number... give us a call and we'll reprint your ad]

HARDWARE/SOFTWARE

Atari editor for all Yamaha keyboards and modules £40. Box of Atari 1040 spares £20. Tel 01865 776587 (Oxford)

Digidesign *Session 8* PC system, core, 883 Studio I/O, R1 remote, 26B SCSI, *Cubase Audio XT*, just add 486and 303s your eight-track £895. Tel Steve on 01753 814230 evenings only

Iomega Zip drive swap for Protech 32-speed CD-ROM drive, compatible with all current Akai, E-mu and Roland samplers. Tel Justin on 01905 27179 after 6pm

MotU *MIDIExpress XT* eight in, eight out, PC- or Mac-compatible MIDI interface, software included, boxed, two months old, cost £330, will accept £250. Tel Steve on 01222 765646 (Cardiff)

PC sequencing and sample editing software for sale. Tel Chris on 07971 341423

ReBirth RB-338 software £70 ono. Tel Alex on 01695 623968 (NW Lancashire)

ReBirth, *Cubase VST V3.52* and *Time Bandit*, all on one CD-ROM for the Mac, bargain £50. Also OS V8.1 £20. 50 *VST* plug-ins £70. *Peak + Plug* £35. Tel 0181 480 9034

Turtle Beach Tropez 12Mb sample RAM, 3.1/95 software and drivers, manual, boxed, excellent condition £100. Tel Michael on 01582 488326 or e-mail: glowgeorge@clara.net

Various software: *SoundForge V4, Cakewalk V6*, etc. Tel Michael on 01582 488326 or e-mail: glowgeorge@clara.net

RECORDING

Alesis ADAT V4/02, recently serviced, 500 hours, home useonly, box, manual, plus ELCO loom £875. Tel 0118 975 2036 (Reading)

Alesis X2 24-channel, eight-buss desk, four-band splittable EQ, fully parametic, eight aux sends, eight stereo returns, everything balanced except inserts, built-in 24:8:2 meter bridge £3,000 ono. Tel Trevor on 01462 684382

Amplex 456 half-inch tape, on 10.5-inch reel, used once, immaculate condition, boxed £20. Tel 01642 293064

Behringer 24-channel four-buss mixer, three months old, as brand new condition, boxed, manual £375 ono. Tel Tony on 01684 565217

Folio Notepad mixer, excellent condition, hardly used £90. Tel Luke on 0115 946 3077

Fostex 2016 line mixer £75. Tel 01923 445262

Fostex FD4 digital four-track with EZFlyer 230Mb hard drive, brand new, still boxed £430 ono. Tel Chris on 0114 268 2546 after 6pm weekdays or any time at weekends

Midiman Syncman synchronises MIDI to tape £60. Tel Steve on 01902 418467 (West Midlands) or 07970 237762

Midiman Syncman Plus MIDI timecode, SMPTE sync box, as new, boxed with manual, cost £170 new, accept £100. Tel David on 01493 843609 (Great Yarmouth)

Neumann TLM193 and elastic suspension £650. Tel 0118 975 2036 (Reading)

Philips digital compact cassette recorder with remote, 18-bit D-to-A converter, gold mic/phones connections, loads of features, as new. Also portable DCC inicluded, both for £145. Genuine reason for sale. Tel 0116 225 8876

Sony MDMX4 six months old, little usage, as new, boxed with manuals. Tel 01795 661502 (Kent)

Soundtracs MIDI Solo 32:8:2, MIDI muting, four-band sweepable EQ, six sends, plus Akai S3000 sampler, 10Mb RAM, CD-ROM drive, hard disk £2,200. Tel Greg on 01480 891845

Spirit By Soundcraft Folio 12:2 boxed £199. Tel 0118 975 2036 (Reading)

Spirit By Soundcraft Folio F1 14:2 mixer, mint condition, boxed £200 no offers. Tel 0171 407 6602 or 0181 328 2068

Studiomaster Sessionmix Gold 16:2 mixing desk with flightcase, four aux sends and direct outs on all channels, mint condition, home use only £300. Tel Ian on 01793 541193 (Swindon)

Tascam 488 MkII eight-track cassette recorder, excellent mixer, two effects sends, dbx, mint condition, box, manual, under warranty £450 ono. Tel Karl on 01455 251829

Tascam 564 MiniDisc multitrack, 12 inputs, three-band EQ, MTC/MIDI Clock out, SPDIF out, MMC sync, immaculate condition, boxed, manuals, warranty, one MiniDisc included, quick sale hence £900. Tel David on 01594 530105

Tascam M2516 16:8:2, 24 channels on mixdown, quick MIDI mutes, excellent condition, home use only, very solid desk, pro spec, only £350 for quick sale. Tel 0181 257 0172 (24 hours)

Tascam M2600 32:8:2 mixing desk, 32-64 channels, eight auxs, studio use only, excellent condition £2,500 ono. Tel 01225 864772

Technics SL1200 MkII turntable and Numark DM1260X DJ mixer £450 or swap for Korg Prophecy keyboard. Tel Steve on 0191 378 1735

Yamaha 03D digital mixer with ADAT card installed, comes with Tascam DA20 MkII, cables and DATs, hardly used and in immaculate condition, bargain at £2,200 all in. Tel Dan on 01725 552351 (evenings only)

AMPS/PA

Alesis Monitor Ones, Joemeek VC3, Folio 12:2, Beyer DT100s, Composer Pro, Alesis SR16. Tel 01909 487750

Fender Twin excellent condition, plus spare valves £450. Tel 0131 553 1617 (Edinburgh)

Peavey ES-12PM powered monitors, pair, 2 I/Ps external speaker connection level control £275 pair ono. Tel Ben on 01933 411509

Two Linear Phase monitor speakers, only three months old, 125W each with 12-inch woofer, five-range midrange, three-inch tweeter, two frequency controls sand circuit protection, both boxed like new, only £250. Tel 07970 463962

EFFECTS

Aiwa graphic EQ, digital stereo, eight-band with BBE enhancer feature, plus four user memories, practically brand new, boxed, only £65. Tel Brad on 01752 695395 (Devon)

Digitech Studio Vocalist superb vocal harmoniser and vocoder, ideal for all those vocal backing solutions £450. Tel Jim on 01332 775693 (Derby)

Lexicon LXP1 digital reverb and effects unit, very high quality, professional machine, immaculate condition, bargain at £225. Tel 01482 448767

SOUND MODULES

Alesis Nanobass a wide selection of excellent bass sounds, good condition with box and manual, bargain at £100! Tel Cliff on 01225 822507 days or 01225 333037 evenings

Ensoniq ASR10 rack with sound disk, manual £1,200. Tel (Singapore) 65 9742 7990 or e-mail: deskjet100@yahoo.com or paris@cyberway.com.sg

Marion Pad rack synth, eight-part multitimbral, analogue, fully programmable £250. Tel Jim on 01332 775693 (Derby)

Quasimidi Rave-O-Lution 309 plus drum synth and audio expansion, mint condition, less than six months old, boxed with manuals and rack ears £500 ono. Tel Jon on 0171 714 8481 days or 0181 760 9833 evenings

LOADS MORE OVER THE PAGE

Quasimidi Rave-O-Lution 309 six months old, absolute mint condition, boxed, manuals, leads, as new, lack of funds forces sale at £350. Tel Alex on 07970 463962

Quasimidi Rave-O-Lution 309 with Drum, Audio and Synth expansion boards, brand new and still boxed, massive sounds, will accept £600. Tel Steve on 01222 765646 (Cardiff). Manchester or Stratford pick-up possible too

Roland MC-303 Groovebox, boxed with leads and manuals, excellent condition, only £275. Tel 0117 922 3211 days or 0117 935 1357 evenings

Roland MC-303 Groovebox, excellent condition, boxed, manuals, PSU £350 ono. Tel David on 01493 843609 (Great Yarmouth)

Roland MC-303 Groovebox home use only, boxed with manuals £350. Tel Dan on 01725 552351 evenings only

Roland MC-303 mint condition, still boxed, both manuals £325 ono or swap for Yamaha CS1x. Tel 01634 578502 (Kent area)

Roland MC-505 the new Groovebox, the greatest dance machine ever, genuine reason for sale £750 no offers. Tel 01978 860908, may deliver

Roland TB-303 five jacks in for Kenton midification £60. Tel Daniel on 00 33 06 1427 5495 (Marseille) or write to Daniel Gomes, 58 rue Jaubert, 13005 Marseille, France

Roland TB-303 immacule condition with manual and carrying case, in original box £550 ono. Tel 01242 523304

Yamaha MU10XG module with *XGEdit* software £70 ono. Tel Alex on 01695 623968 (NW Lancs)

Yamaha MU80 sound module, very good condition, boxed with manual £199. Tel 0171 587 1772

Yamaha TG500 sound module, boxed, manuals, home use only £320 or will swap for Quasimidi Technox or Roland MC-303. Tel Steve on 01703 33880 or 01703 738807

MISCELLANEOUS

All *FM* mags plus CDs up to August 1998, first £50 secures. Tel 01642 826618 (Cleveland area) or e-mail: splendidsplendid@hotmail.com

Ampex 456 grand master two-inch tape on metal NAB spools, used once, as safety copies £35 each. Tel 01482 448767

Audio patchbays quarter-inch jack, 10/20 way, from £10. Patch leads high-quality brass from £65\. Tel 01865 776587 (Oxford)

Cello for sale, full-size Boosey & Hawkes cello, hardly used, excellent condition £450 ono [no number... give us a call and we'll run your ad again next month]

Future Music issues 1 to 36, all discs and supplements £100. Tel 0198 226191

Future Music issues 1 to 45 with CDs. Sound On Sound 1993-5, The Mix 1994-6. Tel 01224 323007 (Aberdeen) for details

Hard Wired electronic magazine, issue 6 out now, exclusive interviews with Frontline Assembly, Ultraviolence, David Morley, Alan Wilder, 70 CDs reviewed. Cheques and POs for £2.99 to D Turner, 26 Fairfield Avenue, Edgware, Middlesex HA8 9AQ

Lexicon MRC remote controller, works for most Lexicon units, has four faders, 22 key pads, visual display and can control 16 different units simultaneously, immaculate with manual £225. Tel 01482 448767

Multicore cables 20-way stage box, one 60-foot, one 25-foot, 10 XLRs and 10 jacks £160 and £95 respectively. Tel 01993 775677

Roland JV dance sound card £230. Tel Andy on 01844 215431 or 01296 655764 or e-mail: kinchmusic@aol.com

Sounds for Yamaha SY85 on disks, over 3,000 sounds and 50 drumkits £45 for all ten. Tel 01628 531477

Soundtracs 48:8:2 spares, 43 faders, Alps K-type 100mm carbon mono, 10KA about two years old, professional studio use only, good condition, boxed £35. Tel Guy on 01730 827265

Sussex-Pro MIDI files 30 zappin' tunes: copies of Spice Girls, Five, Sash, All Saints, also riffs and tutorials covering dance, techno, house, jazz, etc. GM, GS, XG compatible, for the pro with real ambitions. Send £10 cash or cheque to Dave Zengin, PO Box 1420, Bridgnorth WV16 5YU

Various: 19-inch rack cabinet, 46-inch high, 18-inch deep, rear access via door, all metal, filing cabinet, blue, complete with two large patchbays £220. Tel Marc on 01763 775771 (Herts)

Various: Akai S1000, 8Mb £800. Alesis QuadraVerb Plus £180. Seck 18:8:2 mixing desk £380. Alesis QS6 new £400. Phonic PCL3200 compressor, gate £130. Atari 1040 ST with monitor and printer £130. Zero-G and Technotrance sample CDs. Tel 0178 763994

Various: Akai S1000PB £299. Akai EXM008 £149. Akai UB103 £49. Korg X3 £599. Roland A-50 £399. Alesis MidiVerb 4 £149. Spirit By Soundcraft Folio 12:2 £175. Shure SM59 £69. Smoke machine £79. Tel Ross on 01482 494261

Various: Alesis BRC ADAT controller. Roland D-70 keyboard, 72 keys. Roland D-110 module. Alesis MidiVerb II effects. Tel Mark on 01409 271111

Various: Allen & Heath 24:8:2, very good condition £475. Prophet 2002 with sampler £150. Atari 2.5Mb, *Cubase*, *Timelok*, *Replay*, etc, loads more. Tel 0181 675 7757 evenings for details

Various: Apple laptop 265C, 8Mb RAM carry case, etc £300 ono. E-mu e64 (two) SCSI, digital I/P, O/P, 34Mb £1,100 ono. Boss GT-5 guitar pedal £400 ono. Tel James on 0171 561 0175

Various: Apple Power Mac, *VST, Time Bandit, ReCycle, Waves, Hyperprism*, etc, phono ins and outs £1,300. Roland PMA-5 GS unit £250. Volt pro studio monitors, 35Hz to 20kHz £400. Amcron D60 amplifier £150. Mac LCII £150. Tel Mark on 01924 216047 after 2pm

Various: Behringer eurorack 20:4 £150. Yamaha A3000 sampler £700. Audio Technica condenser microphone £50. Alesis NanoCompressor £40. All five months old, boxed, manuals. Tel Paul on 01323 847929 (Eastbourne)

Various: Boss DR-660 boxed with manual £159. Roland TR-727, very good condition £99. Korg DDD1 £89. SY/TG cards, disks JD-990 cards DDD1 cards Yamaha FB01 £49. Roland R-8 MkII boxed, manual £499. Tel 01708 250846

Various: C-Audio amps 600W x2 £380. 400W x2 £280. 15-band graphic £80. All these flightcased. Peavey speakers hisys 2M monitor £200. Hisys 4XT three-way cab £800. Hisys 118XT subs £500. Amp flightcase on wheels £200. Hardly used. Tel 01455 613401

Various: Casio CZ-5000 synth sequencer £120. Casio CSM10P piano module £40. Steinberg *Pro 24* with dongle £30. Roland Quickdiscs £20 for 20. MicroVerb (three) £60 the lot. Tel 01342 323094

Various: Casio FZ-1. 2Mb, disks, boxed, manual £375. Akai S900, manual, disks £330. Sony TCD-D3 DAT walkman, boxed, manual £175. Atari STFM 520, 1Mb, manual, boxed, software, monitor (boxed) £100. Tel 01782 810611

Various: Complete home studio – Fostex R8m boxed. Studiomaster Star system mixer, allows 38 inputs at mixdown. MicroVerb III. Alesis NanoCompressor. PPS100 SMPT sync, all manuals. £1,500 ono. Tel Alex on 01905 421686 after 6pm

Various: Cubase VST £200. Quiklok rack TS1654 £50. Tel 0171 714 8481 days or 0181 760 9833 evenings

Various: Denon DRW S80 twin tape deck, boxed with manual £100. RMK6 rack kit for the above, uses 4U spaces £20. Tel 01708 523469

Various: Digitech Vocalist £195. Alesis NanoVerb £90. Phonic MM122 desk £120. Mac software: *Logic V2.0* £50. *Finale V2.6.3* £70. Tel John on 01539 563899

Various: E-mu Orbit £565. SR16 drum machine £135. Yamaha TG55 sound module £220. Spirit Folio Lite 12-channel mixer £180. All in tip-top condition with boxes, manuals, etc, open to some haggling, will deliver within reason. Tel Tim on 0181 748 5401

Various: Ensoniq EPS sampler, upgraded, 4Mb, eight-out expander. Mackie 1202 mixer. Quasimidi Technox module all at reasonable prices and in great working order. Tel Harmi on 0181 571 0046

Various: Fostex 2412 mixer £850. Two Sansui six-track cassette decks, recently serviced, sync/remote control, MIDI sync/remote, includes all leads and manuals £850, £1,500 all in. Tel 01706 640493 (Lancashire) evenings

Various: Fostex R9 MTC footswitch, looms, six reels £450. Fostex 812 mixer, MIDI mute £400. Both in A1 condition, boxed with manuals, ideal eight-track studio. Tel Chris on 0121 743 9054 (Birmingham)

Various: Home studio set-up – Fostex R8, boxed. Studiomaster Star system mixer, allows 38 inputs at mixdown. JL Cooper PPS sync box. Alesis MicroVerb III. NanoCompressor. £1,300 ono. Tel Alex on 01905 421686 after 6pm

Various: Kawai K4R with 2,000

MORE ADS OVER THE PAGE

ON SALE NOW!

★ INTERVIEWS: HOLMES, SASHA, PLASTIKMAN, CHICANE ★
FUTURE MUSIC
MAKING MUSIC WITH TECHNOLOGY
Issue 76 November 1998 £4.50
SYNTH SPECIAL
All the hottest new synths reviewed & rated
PLUS What the hell is synthesis?
New year index listing over 2,000 products
BEST SYNTH EVER!
You voted the JP-8000 the best... before you saw the JP-8080

The Creative Sample Selection
TIME+SPACE
plus CD-ROM section for PC and Mac
FUTURE MUSIC
Software for PC, Mac, Amiga & Atari
Over an hour of audio
EXCLUSIVE TRACK
Hear Plastikman's unique electro-minimalism in the rhythmic
Plastikman

MAGAZINE AND 2 CDs £4.50

sounds £275. Alesis QuadraVerb Plus £200. Yamaha DD14 drum pads £50. All boxed with manuals. Tel Darryl on 01932 340473

Various: Korg 01/W pop performance card £15. *Cubase* manual £20. Korg 01/WFD 01 dance disk £10. Everything mint, no offers, can post, 80 C50 chrome cassettes for £20. Tel Andy on 01253 890048 (Blackpool)

Various: Korg 05R/W with MIDI audio and computer leads, extra sounds, disk, manual, mint £150. E-mu SI32 with Turbo board and SyQuest EZ drive, leads and manual, boxed. Tel 0117 924 1936

Various: Korg 700S £249. MC-202 £265. SH-101 £265. TH48 analogue sequencer £599. Oberheim DX drum machine £159. SCI Drumtraks £199. Tel Tom on 01384 353694

Various: Korg DSM1 rack, 16-voice, 16 outs, rare £450. Korg M1 £475. Kawai K4R £275. *Cubase VST* (PC) upgrade £50. *Cubase* video manual £15 ono. MicroVerb II £50. Record collection, 4,000+ items, mostly dance £1,500. Tel Mark on 01703 452980

Various: Korg i5S, Yamaha PSR200, Boss DR-660, Yamaha DD50 electric drumkit, all mint, with manuals, boxes, etc, offers please. Tel Justin on 01905 27179 after 6pm

Various: Korg M1 £425. DSM1 rack sampler £350. KPR77 £70. Alesis MidiVerb III £80. MicroVerb II £50. Fostex MN15 mini mixer £25. Yamaha FB01 £60. Soundlab DSM25 mixer, channel EQ, kill switches £80. Cubase VST for PC £60. Tel 01703 452980

Various: Korg M1 with drum card and stand, manuals, mint condition £450. Kawai K4, still boxed, with manuals £250. Boss DR-550 MkII, boxed, with manuals £100. Tel Steve on 01707 886480 (Herts), buyer collects, could deliver locally

Various: Korg X3R £5650. Plus disks. MidiVerb III £100. Alesis Data disk £150. Atari ST 1040 plus monitor and *Notator* and *Unitor* £260. Mackie mixer LA32034 £350. Tel 01823 335410 (Taunton) evenings

Various: Korg Z1 with sound card £1,200. Korg TR rack £570. Lexicon MPX1 £500. Roland SRV-330 dimensional space reverb £170. Digitech TSR12 effects unit £120. Tel Scott on 0181 647 7056

Various: Korg Z1, boxed as new, four months old £1,200. Yamaha A3000 MkII, three months old, 64Mb, output board fitted, boxed, free access to Turnkey Analogue Museum £1,000. Both items mint, no offers. Tel Craig on 07971 378713 (Glos)

Various: Moog three-band parametric EQ with overdrive, very rare £450. Fostex 080 with expanded drive £700. Mackie 1604 VLZ £595. Roland R-8 £240. Tel 0141 334 4452 (Glasgow)

Various: Novation BassStation rack, boxed, manual, PSU £180. Roland MVS-1 vintage synth module, boxed, manual, PSU £150. ART MultiVerb SE boxed, manual £180. Last 50 issues of Future Music with CDs £50. Tel Ian on 01904 656573

Various: Peavey DPM2 synth, gutsy sound, filters £195. Roland XP-10 £265. JX-3P PG-200 £210. K4R £145. Alesis QS6 £145. Yamaha TG500 £315. Wurlitzer electric piano £250. Will post. Tel 01261 815707

Various: Roland JP-8000 £700. E-mu ESI4000 16Mb £800. Atari 520ST, monitor, Cubase V3 £170. Write to Pete Clark, 17 Crown Street, Oxford with telephone number enclosed

Various: Roland Juno 1 £275. Juno 2 £350. Juno 106 £450. SH-101, MC-202 £250. TB-303 many mods £750. TR-606 £100 and £120. DX7 with cartridges £250. DX100 £100. SK30 £275. Others. Tel 01670 523363

Various: Roland Juno 106 £389. XP-80 £880. Juno 1 £220. Alesis QSR £400. Matrix 1000 £250. Waldorf Pulse Plus 2 £280. Jupiter 8 rack £689. PG-800 £170. MKS-70 £460. Leave your number and message on 01523 172676 pager

Various: Roland MKS-70 with PG-800 programmer £550. Akai S900 sampler £200. Roland TR-626 drum machine £100. Yamaha TQ5 tone generator £150. Tel Toby on 0171 729 4183

Various: Roland R-8 drum machine £250. Roland MC-303 GrooveBox £400. Yamaha CS1x keyboard £450. Akai S2000 sampler with 32Mb and eight-output expansion board, a steal at £700. Tel 07887 617177

Various: Roland SH-101 £280. Roland MC-202 £20. Roland TR-606 £150. Fostex Hexamix four-track £50. Tel Gary on 0181 541 0091

Various: Roland SH-101 with manual and case £240 ono. Watkins Copycat £55 ono. Tel John on 0114 255 4129 (Sheffield)

Various: Roland TR-606 Drumatix £120. Roland TR-707 £120. Roland JX-1 synth £200. Tel Gary on 01905 22584 (Worcester)

Various: Roland TR-909, boxed with manual. OSCar with manual £800 each or swap for something decent like Nord or JP-8000. Tel Sam on 01384 231176 or 07666 804067

Various: Roland W-30 £630 ono. Atari 1040 with *Creator* £200 ono. Studiomaster Club 2000 12-track mixer £260 ono. Korg Poly 61 £100 ono. All in excellent condition with manuals. Tel Simon on Eastleigh on 01703 694894

Various: Sample CDs (audio). *That Jungle Flavour Vol. 2* £25. *Rich Mendelson's Phat & Phunky* £25. *Orchestral Flavours* £10. Will swap for other dance, synth CDs, etc or E-mu ESI CD-ROMs. Tel 0966 1469486 (Midlands)

Various: Shure SM58 £80. SM57 £70. New mic stands from £12. Gaffa £3. Boxes, mixers, effects, cables, everything for the musician, call for free list. Tel Peter on 0181 460 1139

Various: Sony MZ25E MiniDisc Walkman, never used £120 ono. Zoom 9001 multi-effects with pedal board £55 ono. All in excellent condition. Tel Alex on 01695 623968 (NW Lancashire)

Various: Sony TD10 ProII professional portable DAT £900. Sony DT1000ES DAT £375. Akai S950 mint condition £395. Roland SPD11 £350. Also mics, processors and effects due to studio clearout. Tel 0121 749 6846

Various: Tascam MM1 20:2 rack mixer £225. Box of over 100 mono leads £100. Soundlab DSM15 DJ mixer £45. US Robotics Sportstar Flash 56K internal modem £75. Tel Carl on 01507 606956

Various: Yamaha A3000, 32Mb, four months old, boxed as new £850 ono. Also Atari ST with monitor £125. Zoom 1201 £65. TR-707 boxed with manual and M64 memory card £120. Tel Marc on 01785 715355 (Midlands)

Various: Yamaha CS1x, CD, manual, extra professional sound banks, mint £399. FB01 boxed, manual £49. JD-990 cards, SYTG 55/77 cards, disks, K2000 disks. TR-727 £99. Korg DDD1 £89. Boss DR-660 £169. Tel 01708 250846

Various: Yamaha QY20 cracked screen £150. Roland CM-64+ with sounds £130. ART MR1 £60. Casio CZ-230S £50. Atari STFM, 2.5Mb, software £140. Roland CA-

FREE READER ADS form

Name .....

Address .....

.....

.....

..... Postcode .....

Daytime hone number .....

Equipment category .....

Send to: Reader Ads, *THE MIX*, Future Publishing, 30 Monmouth St, Bath BA1 2BW

30 arranger for CM-64 £35. Mini 4:2 mixer £10 or the lot for £550 plus carriage. Tel Robin on 01305 785675 after 6pm

Various: Yamaha SY85, manuals, additional sounds £550. Korg 05R/W with manuals £200. Mackie 1604 mixer, mint £450. Yamaha FX500 effects £175. Kawai K4 synth, one key sticking £225. Rack box modular system, six units £1,500 the lot. Tel Mike on 01425 471924

Various: Yamaha TX802 £300. Roland JV-1080 with session board £650. Boss SE-50 £200. Peavey Spectrum organ module with 2U case £195. 2U and 3U cases £40-60. Tel 01483 832251

WANTED

Akai MPC2000 pay £550. or swap for ESI32 with 32Mb, boxed, plus E-mu CD-ROMs. Also wanted, audio sample CDs: *Liquid Grooves, XX-Large Pads, Technotrance* and *Protezdia* CD-ROMs. Calamari board. Tel 07775 935821

Atari with SM124 monitor, *Cubase*, RAM upgrades, or basic MIDI equipment, compatible with an Atari 1040STE, must be cheap as I'm a poor production student. Tel Gavin on 01556 630255

Oberheim SEM have cash waiting. Tel 001 909 854 5941 (California) or e-mail: nuggetlink@aol.com

Nord Lead rack, SyQuest EZ135 drive, Cubase V3 for Atari. Tel Andy on 01482 4486474

Roland JD-990 with memory card if possible. Tel Russ on 01706 659877

Various: Yamaha electric grand piano CP70B, CP70M or CP80M. Wurlitzer EP200 electric piano. Akai MB76 mix bay. All must be excellent condition, can collect. Tel Steve on 0802 583242 or e-mail: styson@sal.co.uk

Yamaha CP15 or CP10 keyboard or other piano weighted MIDI keyboard. Tel Philip on 0171 417 0230 days

PERSONNEL

DJ producer seeks similar to work on music-related businesses and music projects, also hang out and get zooted, must have own turntables and music selection, music influences: soul, hip hop and garage. Tel Kenny on 0958 544512

Drum n' bass remixes and tracks, dubplate cutting, call Dameon Troy on 0956 139029 (London). Also new 100% dubplated, one-hour set for raves or parties, will DJ abroad

Experienced composer jazz, rock keyboardist, now into house, drum n' bass, big beat, trip hop, requires record deal. Over 100 tracks on http://members.tripod.com/~edgardo_plasencia.

Female vocalist wanted to join guitarist to form rock/pop band, County Durham area, experience not essential. Tel Paul on 01325 488615

Genuine record company with vision and humour required by off-the-wall Propellerheads, All Seeing I-influenced mad combo with commercial witty dance tracks, demos ready. Tel 01483 578240 (answer machine)

Hard working enthusiastic, talented programmer and producer, into house, techno R&B and bhangra seeks production engineering work, preferably in London and Hertfordshire area. Tel G on 01462 678685

Management required to secure remix work for producer, can supply demos on request, no timewasters. Tel M Hall on 01246 220164

Powerful vocalist required for dance/pop based recording projects in Edinburgh, opportunity for writing and song credits, record company and publishing interest so professional approach required. Tel Gary on 0131339 2612

Programmer high quality work, all deadlines met. Tel Geraint on 017957 293734

Session drummer available, specialising in live drum n' bass, full live drum tracks or individual breaks and samples, full range of equipment, acoustic, electronic, competitive rates, profession attitude. Tel George on 0118 959 8982 (Berks area)

Singer (with open mind) required, male or female, style from Deep Forest to Latin jazz and back, some contacts required, London area. Tel Miles Mälgand on 0181 737 3731

Skint hardcore producer wants to hook up with MC, keyboard players and breakdancers to create new innovative PA. Write to Barry, 26 Muirfield Way, Livingston, Scotland EH54 8DW or tel 07957 980353

Wanted: energetic drummer - drum n' bass, trip hop; experienced keyboarder, programmer, sound artist; expressive female/male vocalist/lyricist (multi-instrumentalists?). Must be ambitious. I want to establish professional break beat, progressive electronic band. Tel 0181 671 4938

HELP

Help us! Dance music group with studio and loads of tracks need your money, help or backing. Tel Dameon on 0956 139029 (London). Demos on CD also available

SOUNDS

Acid – high-energy, high-trance label, currently seeking new material for future releases this year, send demos to Tim, Naked Distribution, 33 Sherbourne Street, Birmingham

Big break?! I'm looking for all drum n' bass and breakbeat producers, send your demos to James @ Flexin', 53 Bloomfield Road, Linden, Gloucester GL1 5BW for your big break or tel 01452 413316

DJ tapes for sale, all styles covered from techno and trance to jungle and gabba, only £2 each. For list, send an SAE to David Pincott, Fairfield, Trellech Road, Llandogo, Gwent NP5 4TL or tel 01594 530105

Drum n' bass required for new innovative label, if your music is experiemntal or groundbreaking we want to hear from you. Tel Simon on 0161 374 1341

Free tracks for Web sites, visit my music page, contact me if you want a track produced for your own site. http://members.tripod.com/~jupiterjimmy/index/htm or e-mail: 100714.334@compuserve.com

From the Start to the beginning, 3.5-inch PC floppy album featuring 10 MIDI files, two WAV files: trance, hazz, thump. Send £1 (postage paid) to Andrew Savage, 35 Kearsley Road, Sheffield S2 4TE

Korg M1 sounds 200 dance, techno, kickin' sounds, basses, filter sweeps, analogue synths, kits on Atari and PC format £35. These are serious sounds. Tel 0121 443 2743

Korg Trinity sounds, 256 new programs, 256 new combinations, all home-made for dance music enthusiasts, powerful synth basses, pads, sound effects, etc, all on one disk £5. Please send cheques/POs to M Wheawill, 41 Woodsend Road, Urmston, Manchester M41 8QY. Also quality MIDI files, loads of instant arpeggios for you to manipulate, riffs, patterns, templates as standard MIDI files, intended of PCs with *Cubase*, all on one disk £6.99

Nu-Beats 2000 25 fresh breakbeats on a 50-minute CD, as played by top session player, 85bpm to 160bpm, fat beats for hip hop and drum n' bass, send £13 (including p+p) to C McBride, 59 Blythswood Street, Liverpool, Merseyside L17 7DE or tel 0151 727 6517

One man, one computer, one sampler. Dameon Troy's 19-track CD, LP, tape, South London jungle and drum n' bass producer, DJ. Also new two-CD dance mix with hotshots MC Mad Lee V. Tel 0956 139029 (London) now!

Producer/DJ with independent label "attention music-makers" into UK house, garage, drum n' bass. Send demos to 12-15 Hatherley Mews, London E17 4QP or call Joe on 07957 724730

Producer seeks quality unpublished recordings, dance, drum n' bass, indie, garage, house, hip hop, groove, ambient, techno, etc. Send demos and SAE to Brian Hibbert, PO Box 129, Hampton, TW12 2YW

Psychedelic techno trance, breakbeat demos wanted by Midlands label with distribution sorted. Send to Pasc Naked Distribution, 33 Sherbourne Street, Birmingham B16 8DE

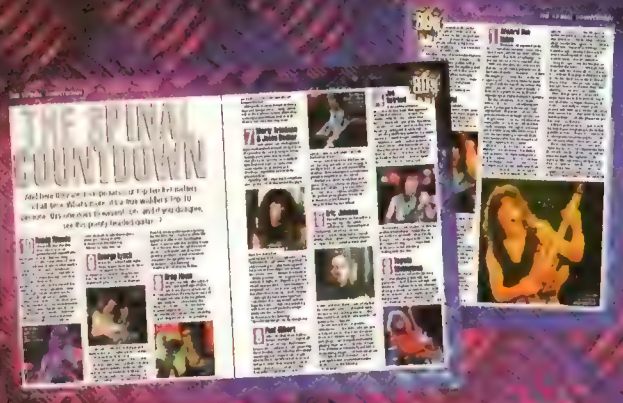
Remixer DJ Omar's Underground DJ 88, summer of lovee to 90s' club circuit, new projects and original classic house tracks sought for new dance market to bomb into charts, music dance charts around the world considered, record labels, artists, etc, please send details and showreels, multitracks, a capellas, samples on DAT to USA Productions, 12 Quaggy Walk, Blackheath, London SE3 9EL or tel 0181 318 2934

Roland JV-1080/2080/XP sounds, technoid 128 vintage dance techno patches two kits, all on one disk, all formats, amazing sounds and a real bargain, don't miss out, only £15. Tel Kez on 01208 873649

Techno artists required by a forward-thinking label, hard, funky and minimal styles appreciated, please send demos to Sound Treatment, PO Box 17, York YO51 9XX

IT'S THE SPINAL COUNTDOWN!

OUT NOW!



In the new Guitarist

Our **A-Z of the best and worst** of 80s moshing madness. Everyone's included, from **Michael Angelo to Dweezil Zappa**, from **Jason Becker to John Sykes** and from **CC DeVille to Danny Spitz**. And we don't pull our punches!

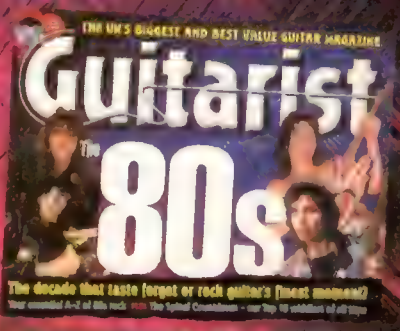
PLUS! Want to find out the **Top 10 widdlers** of all time? And play their licks? Experience Dave Kilminster's monster **tab and CD demonstration**. You won't believe it... and you might even be able to play it.

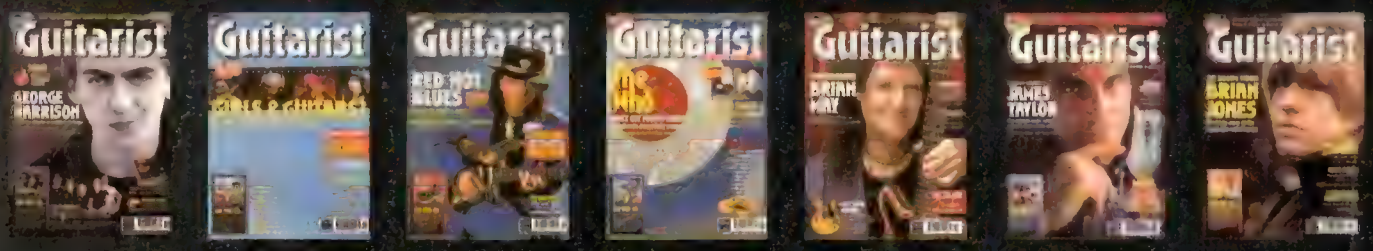
Are you a recording guitarist?

Then check out our head-to-head test of the latest in **digital four-track recorders**. They no longer cost the earth and they're easy-peasy to use, with CD quality results. We tell you the **best one to buy** for under £650!

Oh, and fancy hearing a Conklin 8-string guitar demoed?

Simon Bradley does the biz on this month's ace **Guitarist CD**. Don't miss it!





Guitarist ...IF YOU LOVE GUITAR

THE Mix — WELCOME TO CLASSIFIED

TO ADVERTISE CALL: ALEX MORTON on 01225 442244 ext 2210 or FAX: 01225 732396

FOR SALE

ROW AUDIO SALES

AKG C414 EB MIC	£230
AKG C1000 MIC	£130
SPIRIT FOLIO SX 20/4 MIXER, EX DEM	£350
STUDIOMASTER P7 16/8/16 CONSOLE, MIDI, VGC, MANUAL	£700
FOCUSRITE GREEN 3, VOICEBOX MKII (RRP £1000), EX DEM	£675
ROLAND JD800, IMMAC, INC 6X SOUND CARDS	£775
AKAI S2000, 32 MEG	£475
AKAI S2000, 16 MEG	£450
ART TUBE PRE AMP	£75
ART DRX ELITE, F/X	£120
RODE NT2, EX DEM	£275
PHILIPS DCC 600	£170
PHILIPS DCC 951	£180
DRAWMER LX20	£140
BEHRINGER COMPOSERS	£145
ALESIS MIDIVERB 4	£160
ZOOM 1202 £80 ZOOM 1204	£130
SHURE SM57/58s	£70
BOSS SX700, SUPER F/X	£240
ROLAND R8 DRUMBOX	£200
AIWA HHB PRO ONE PORTABLE DAT	£400
PIONEER CDR5 CD RECORDER, EX DEM	£400
YAMAHA EMP700 STEREO F/X, INC SOFTWARE	£240
LEXICON ALEX	£130
AKG C1000 MICS	£130
AUDIO LOGIC QUAD GATE, BOXED, EX DEM	£250
FREEBASS 303 CLONE	£80
ALESIS DM5 DRUM MODULE	£200
SPIRIT FOLIO NOTEPAD MIXER	£100
CHEETAH MS6	£250

TONS MORE ..... PHONE US NOW!!

WANTED
All used recording equipment for cash.
Instant decision. Same day collect nationwide.
Tel 01625 574276 (24 Hrs 7 Days)
Mobile 0802 418616 ANYTIME
Email Dwebs95615@aol.com

INSTANT MEDIA

MAGNETIC MEDIA

4mm DDS 60m TAPE (5 pack)	£19.98
4mm DDS 90m TAPE (5 pack)	£16.45
4mm DDS 120m TAPE (5 pack)	£38.19
4mm DDS 125m TAPE (5 pack)	£100.46
TRAVAN TR-1 (5 pack)	£59.81
TRAVAN TR-3 (5 pack)	£76.96
TRAVAN TR-4 (5 pack)	£100.46
Zip Disks (5 pack)	£44.06

AUDIO CD RECORDING SOFTWARE
ADAPTEC EASY CD CREATOR DELUXE with SPINDOCTOR £64.63

CD LABELLING SYSTEM
CD label kit with software £23.50
Pack of 50 white labels £9.40

Floppy Disks (Box of 10) £2.50

CONSUMER CD-R
CD R 74 Min £2.75 each

COMPUTER CD
BRANDED (various) £1.25 each
UNBRANDED 89p each
UNBRANDED WHITE PRINTABLE £1.18 each
RE WRITABLE £9.40 each

WE ALSO STOCK THE FULL RANGE OF PRINTER CARTRIDGES. PLEASE CALL FOR THE BEST PRICE.
ALL PRICES INCLUDE VAT
FOR DETAILS OF OUR FULL PRODUCT RANGE PLEASE VISIT OUR WEB SITE:
http://www.santacruz.co.uk/instantmedia

MULTITRACK SALES

YAMAHA PROMIX 01	£599
OBERHEIM 0BMX (as new)	£899
AKAI S2800 (10MB, mint)	£499
AKAI S1000 (2MB)	£450
AKAI S950	£299
ROLAND SC88VL (mint)	£299
ROLAND JX8P (V.G.C.)	£199
YAMAHA DX9 (mint, rare)	£199
FOSTEX MIXTAB (as new)	£199
KORG DFSM.1 (rack dss sampler)	£299
ROLAND JV1080	£499
WALDORF PULSE	£199
FOSTEX B16 (remote available)	£795
YAMAHA TH500	£299
ACESIF D4 (drums)	£175

WANTED
ALL STUDIO & MUSIC EQUIPMENT
ASCOT (01344) 891110
or (0831) 882666

CALL ABOUT OUR
FREE
TYPESETTING AND AD DESIGN SERVICE

BOOMERANG Sounds
SALES
INSTALLATION
MAINTENANCE
43a Elsinore Road, Old Trafford, Manchester, M16 0WG
0161-873 7770

AUTHORISED APPLE RESELLER New & Used Mac's	£Call
Digidesign Pro Tools III Core PCI Refurbished V4.2	£3765
Digidesign Project II & 882/20 Interface - 16 Track Event PCI Audiocards	£1475
Darla - 2 in / 8 out	£275
Gina - 2 in / 8 out & SPDIF	£425
Layla - 8 in out & SPDIF	£799
Korg 1212 PCI Audio Card	£599
Midiman DMan 2044 PCI Audio Card	£225
Midiman Winman 2 x 2 Midi I/O	£70
Steinberg - VST (Mac of PC)	£265
Rebirth RB338	£115
Recycle Audio Groove Master	£149
Opcode Vision DSP - Mac	£269
Iomega Zip Drive - Ext SCSI	£125
HHB CDR800 Pro CD Recorder	£925
Neuman TLM103 - Vocal Mic	£699
Rode NT1 Studio Condenser	£199
Rode NT2 Studio Condenser	£395
Rode Classic - Valve Condenser	£899
Lexicon MPX1 Multi FX	£699
Lexicon MPX100 Budget Multi FX	£229
BehringerComposer Compressor	£165
TLA 5021 Dual Ch Valve Compressor	£425
LA Audio EQX2 - Dual Ch EQ	£149
LA Audio MLX2 - 2 Ch Mic Pre Amp	£149
SPL Stereo Vitalizer Jack	£165
SPL Mikeman - 2 Ch Mic Pre Amp	£195
Joe Meek VC3 Pro Channel	£179
Tascam DA20 MkII DAT	£499
Tascam DA30 Pro DAT	£899
Far CR20YS Nearfield Monitors	£525
Far DBW80 Studio Monitors	£925
Beyer DT100 Headphones	£110
Evolution MK149 Midi KBD	£99
Yamaha O2R Digital Mixer	£4595
Mackie 1604 VLZ	£699
Mackie 8 Bus - 16 Input	£1699

All prices include VAT
Next day delivery at cost
Studio Design & Installation Service
Mac & PC Hard Disc Recording Specialist
Fax: 0161-872 4494
E-Mail: Boomerang@Compuserve.com

WHY PAY MORE FOR DATS?
ALL DATS ARE NOT THE SAME - SOME COST TWICE AS MUCH!

DAT R30 - FROM £2.89+VAT! (£3.40) DAT R61 - FROM £3.35+VAT! (£3.94) DAT R12? FROM £4.35+VAT! (£5.11)
DAT R46 - FROM £3.09+VAT! (£3.63) DAT R92 - FROM £3.85+VAT! (£4.52)
MAXELL TAPE - RATED FIRST IN A TOP SURVEY (COPIES AVAILABLE)

COMPACT 1U PATCHBAYS
£37.99+VAT (£44.64)
32-WAY JACK/JACK 24-WAY JACK/8 WAY MIDI
EASILY REVERSIBLE NORMALISING

DAT STORAGE RACK £3.50+VAT! (£4.11)
+ HOLDS 10 DATS + LOCKS TOGETHER + FREE STANDING OR WALL MOUNTED +

PLASMA GLOBES ONLY £37.99+VAT (£44.61)

CALL FOR FULL PRICE LIST
CRYSTAL! TEL: 01223 208937 FAX: 01223 207021
NORTH ROAD WENDY ROYSTON HERTS SG8 0AB

SERVICES

MUSICIANS' UNION

£5 MILLION PUBLIC LIABILITY INSURANCE
£500 FREE INSTRUMENT INSURANCE
CONTRACT ADVICE SERVICE
FREE RECORDS SERVICE
CAREER ADVICE
LEGAL ADVICE
AND MUCH MORE
JOIN NOW
FROM JUST OVER £1 PER WEEK
Musicians' Union
60 - 62 Clapham Road
London SW9 0JJ
0171 582 5566
www.musiciansunion.org.uk
Please mention this mag when you contact us

Zero PRODUCTIONS
TEL 01344 488908 • FAX 01344 409998

Solo artists / groups required for dynamic management and production
All musical styles considered. Please send demos and biography to:
ZERO PRODUCTIONS, PO Box 3737, Bracknell RG12 9XY
Representation Service available - we will present your demos to record companies on your behalf. For more info phone 01344 488908
Small run tape and CD duplication, CD mastering, CDR's digital editing / PQ, Design and print, also Song to Lyric service available. For more information phone 01344 488908.

SERVICES

MODERN & CLASSIC MUSICAL EQUIPMENT REPAIRS

FREE
* Collection & delivery on most items
* Estimates - Phone for details
* 3 Months warranty on repairs

Anywhere in the U.K. Professional, friendly service that won't break the bank. Call 01203 665665, 7 days a week
Emergency Service with NO extra charge, EVEN out of hours! That'll be The Service Zone

E-MU ROLAND THE SERVICE ZONE AKAI

Authorised warranty service on major makes. Also classic restoration, Sequential etc.
30 years sound experience. For Hammonds, Moogs, Rhodes, Wurlitzers etc. use the company that grew up with them
24 hour Hammond Hire, Restoration & Service in London, call HHC on 0171 288 0037

PANIC Music Services

AUTHORISED HI-TECH SERVICE CENTRE
FOR: Repairs to all makes of Keyboards - Synths Modules - Samplers and Amplification Computers - Atari - Macintosh - PCs
All work to BS 5750 Quality Inspected

TEAC - TASCAM
DA88 Service Centre
YAMAHA
AKAI AUTHORISED SERVICE CENTRE ART KORG E-MU Roland ENSONIQ SANSUI

CALL US ON 01954 231348

WANTED

WANTED
FOR CASH OR EXCHANGE
STUDIO & PA EQUIPMENT
+ all musical instruments & technology
MUSIC EXCHANGE
56 Notting Hill Gate, London W11
0171 229 4805
OPEN 7 DAYS
LARGE SELECTION ON SALE

CASH TODAY FOR ALL STUDIO GEAR!

SELECTION OF COOL GEAR		COURIER SERVICE	BUY/SELL/PX
AKI S51 32/8/2	£399	Roland R8300	£649
Aks MPC2000 16 MB	£695	Roland JV1080	£695
Aks S20 1/ MB	£295	Yamaha Promix 01	£599
Ensoniq TS10 w/dation	£595	Alan & Hi Res Monitor	£120
PHONE FOR FULL LIST!		MOSTLY MINT/BOXED/MANUALS	

(01888) 884677 T/FAX (07778) 883799 MOBILE
Music World

Spares Repairs — Atari ST & TT — Hard Drives Rackmount

Keychange Music Services
01925 266120
Email barrie@atamusic.u-net.com http://www.atamusic.u-net.com

DUPLICATION

SAMSUNG
PRINTABLE CD

TNT
CD DUPLICATION

FREEFONE
0800
328
0692

Short-run specialists ▪ On body colour printing
1 - £6.99 ▪ 10 - £45 ▪ 50 - £110 ▪ 100 - £195
Design service available - Call for prices

---

www.primecds.com

CD-PRODUCTION
DIGITAL MASTERING • PQ ENCODING

SATISFIED WITH YOUR LATEST RECORDING?
WE CAN DRAMATICALLY ENHANCE YOUR SOUND IN OUR DIGITAL MASTERING STUDIOS.
ALBUMS BY
ST.ETIENNE, AEROSMITH AND MARC BOLAN
HAVE BENEFITTED FROM OUR SKILLS.
SAVE MONEY ON YOUR CD PRODUCTIONS
WITH OUR NEW UNBEATABLE PRICES
Stop Press... Limited Offer... Phone Now!

CD AUDIO • CD ROM • CASSETTES • VINYL
ARTWORK • GRAPHIC DESIGN • WEB PAGE DESIGN

Tel. 0171 700 3060
Fax.0171 700 5544
PRIME CDS

ONE-OFF CDS • CASSETTES • VINYL

ONE-OFF CDS 1-100

Compact Disc Manufacture

One off CDs up to 74 mins £23.50 Inc VAT

500 CD Singles complete only	£763.75	1000 CD Singles complete only	£1086.88
500 CD Albums complete only	£869.50	1000 CD Albums complete only	£1292.50

Digital/Post Mastering
Sadie - Focusrite - GML - Neve
Lexicon - TC Electronics - MD2
20 Bit A to D - 32 bit DSP.

Tel G.R.S.
01424 444141
All prices inc VAT

Artwork Design & Layout
Drum Scanning - Typesetting
Fine art - Imagesetting
to Film & Bromide.

SIMPLY THE BEST.
THAT'S WHY MOST MAJOR RECORD COMPANIES USE

SOUND
CD's - Cassettes

Tel: 01244 280 602 Fax: 01244 288 581
Email: cdsales@smmuk.co.uk
Spool Multi Media

CD Mastering
CDR Duplication from £3 (£3.53 inc.)
Copy Masters and Editing
Real Time Cassette Copying
Free Glassmaster - 1000 CDs c.£650 (£763)
Laser printed labels & inlays
Every copy individually checked
Excellent quality & presentation
Best prices, ultra fast turnaround

RPM
Repeat Performance Mastering
6 Grand Union Centre
West Row
London W10 5AS
Tel. 0181 960 7222
Fax. 0181 968 1378
www.repeat-performance.co.uk

SOUND DISCS U.K. LTD.
CD MASTERING & MANUFACTURE
Digital Editing £50 p.h. ADAT ProTools VST Waves
PQ CDs fr. £60 CDRs from £3 500 CDs from £560
CD-ROM VINYL CASSETTE ARTWORK VIDEO
www.sound-discs.co.uk email sound.discs@virgin.net
Tel: 0181 968 7080 Fax: 0181 968 7475

HILTONGROVE
Tel: 0181 521 2424
Fax: 0181 521 4343

The Hiltongrove Business Centre,
Hatherley Mews, Walthamstow,
London E17 4QP

3 Mins walk from Walthamstow Central
(Victoria Underground/ BR Main Line),
11 mins from M25

- Compact Discs
- Pro Mastering
- 3 Studios
- 32 Bit Technology
- Cedar
- Sound Restoration
- Video Production
- Digital Video Editing
- Enhanced CDs
- One-off CDs
- In House Design, Print
- Digibin Cassettes

FINEST QUALITY AMAZING PRICES
CD MANUFACTURE - DIGITAL EDITING
AUDIO MASTERING - ART & DESIGN

www.mediummoose.demon.co.uk/cd
Tel 01424 882661

---

dBMasters

High Quality CDs from: £14
• Compilation & PQ • On-body print • Inlays • Scanning
• Mail order welcome • Please ring for info sheet
Tel: 0181 851 8804 Fax: 0181 851 5335
http://dspace.dial.pipex.com/town/drive/kbv237

LATEST GEAR
NEW LOW PRICES

CDRs
ON DISC PRINT
BLANK/DUPED
PARK 0161 797 7991

DUPLICATION • MASTERING
Wantra CDs and Recording : 0121 682 0910
Best value! now from £1.10 a CDR & label (plus VAT)*
Best quality! "It rocks!" "mouth-watering quality"
Best service! 10-day turnaround for duplication
*£1.29 inc VAT
ARTWORK • RECORDING

DIRT CHEAP PRICES !

500 CD	ALBUMS:	Only £720
500 12"	SINGLES:	Only £600
500 Cass	ALBUMS:	Only £500
500 7"	SINGLES:	Only £480

SHOP READY PRODUCT ★ NO EXTRA V.A.T.
FOR MORE "DIRT CHEAP" PACKAGE DEALS & FREE INFO PACK CALL:
tel: 0181-536 0700 fax: 0181-536 0708

CD Duplication

We can Master your CD's from most formats, and duplicate on silver or gold CDR's. Plus print on-Body Label. Also Video, Audio Cassette Winding & Duplication undertaken.
Please phone for further details and Prices.

CDR Prices

50 Copies	£125 (£146.89 inc.)	300 Copies	£435 (£511.13 inc.)
100 Copies	£220 (£258.50 inc.)	400 Copies	£525 (£616.88 inc.)
200 Copies	£320 (£376.00 inc.)	500 Copies	£620 (£728.50 inc.)

Prices Inc: On-Body or Labels + V.A.T. and Exclude Delivery
Call: Infinitely Ltd
Phone: 01280 704377 Fax: 01280 700850

CD MASTERING
32-bit Editing & PQ Encoding
AC Elec's, WAVES, Opcode Fusion, Sound Forge and Steinberg
CD COPIES - BEST PRICES
TEL - BPM - 0181 892 8856

M1's One-Off CD Service
Add a professional touch & have your music put onto CD. We transfer recordings from cassette, CD-R or DAT onto CD.

1 CD Single	£15	1 CD Album	£20
3 CD Singles	£21	3 CD Albums	£29
5 CD Singles	£27	5 CD Albums	£38
10 CD Singles	£47	10 CD Albums	£60

All prices include VAT, mastering, printed inlays & labels, jewel cases & PQ encoding
Personal small order specialists Mail order welcomed
Call or fax for a CD info brochure on 01273 572090

DUPLICATION

Sound Cuts Ltd
0181 964 4091
CD Mastering
Digital Editing
CD Duplication
COMPACT DISC DUPLICATION
CDR Copies from an existing CDR
£3.50 per copy
inc. VAT
Including On Body Printing

10th PLANET
BEST CDR PRICES IN U.K.
excellent quality
unrivalled service
0171 252 0610

Keynote Cassettes
- ✓ CASSETTE DUPLICATING
- ✓ CUSTOM BLANK CASSETTES
- ✓ CDR - SHORT RUN CDS
- ✓ CD MASTERING
- ✓ COMPACT DISC PACKAGES
- ✓ FULL PRINT SERVICE
- ✓ DAT/MD/CDR SUPPLIES

CALL NOW FOR A QUOTE & FREE BROCHURE
SALES LINE FREEPHONE 0500 23 45 15
TEL: 01252-784258 FAX: 01252-782842
EMAIL: keynote@dial.pipex.com
1977-1998 CELEBRATING 21 YEARS
TRUST THE EXPERTS NOT YOUR LUCK

JKMS CD Duplication
01934 842842
Best Price & Service
i.e. 50 CDRs £150
Price includes
2 colour Artwork
Packaging
and VAT
Credit Cards
Welcome

Real Cheap Real Time & CDs
Small order specialists.
Excellent inlay/label designs.
Accept -
DAT/CD/MC/MD/HiFiVHS
J B Audio/Video
01621 783518
also Digital 24track
Mobile Studio
call 01524 734398
for best deal.

Duplication
Blanks & Accessories
CDs, Dats
& Labels etc.
FREE Catalogue
& Sample
Downsoft Ltd
01372 272422
http://www.downsoft.co.uk

MEDIA mastering
- one off CDs
- post production
- mastering
- digital editing
- fully equipped
- multi-track studio

FREEPHONE 0800 3289310
From start to finish, we're sound

Tapethat STAFFS
Super quality CD & cassette duplications
Custom wound blanks • Labels and inlays • Keen prices
Friendly professional service
Short run specialist • Mail order welcome
Tel/Fax 01689 883001

LIMITED OFFER
Short Run CD Duplication
At Unbeatable Prices!
100 CDs £195
50 CDs £120
10 CDs £30
Contact: **ITAL SUPPLY**
0181 880 1302
Includes Digital Mastering and Full Colour Labels.
Colour Laser Inlays - Optional Extra (50p each)

THE MIX REACHES 2500 STUDIOS EVERY ISSUE. ADVERTISE YOUR STUDIO SERVICES HERE.

STUDIOS

Red Productions
the studio for R&B, Dance & Hip Hop
Digital Editing
CD Mastering
Production
Recording
Remixing
Richard Edwards
Tel: 0171-237 5855
Tower Bridge Business Complex, Block B,
Third Floor, Unit 2, 100 Clements Road, SE16 4DG
www.mr-red.dircon.co.uk
email: mr-red@dircon.co.uk

FOEL
AFFORDABLE RESIDENTIAL
24 TRACK RECORDING
FOEL STUDIO,
LLANFAIR CAEREINION,
WELSHPOOL, POWYS,
WALES SY21 0DS
TEL: 01938 810750

STUDIO DESIGN

SM Acoustics
Studio Design & Build
- Acoustics design
- Full Construction
- Air conditioning
- Workstations

For the best rooms and a competitive package contact us now
0385-586079
www.smacoustics.co.uk

Current clients
M62, London
SD Post, London
Cranleigh School, Surrey
Brain Foundation, Marlow
Arwen Productions, Tripoli
The Academy, Guildford
Spirit Productions, London

STUDIO SERVICES

PERFECT YOUR IMAGE
With the new studio monitor from
ACOUSTIC ENERGY - RE2 Pro
Award winning metal cone technology
Superb transients, speed, power and efficiency
make the RE2 Pro the best imaging monitor around
Voiced at Abbey Road & Red Bus studios, London
Tel: 01285 654 432 Fax: 01285 654 430
(AE) ACOUSTIC ENERGY

NEW AGE STUDIO
All the technology and expertise you need to produce top quality dance tracks.
Professionally designed studio, creative vibe, used by top DJs and producers.
Call Alan
0181 446 3098

AIRWAVE STUDIOS
Best 16 track
in North London
Live Drums
Brilliant Engineering
Good Coffee
Tel: 0171 624 6448

MINI DISCS

Digital Media Specialists... Offers

PHILIPS CD Recorder 870 ..... £349
SONY MD Player MDS-JE520 ..... £189
SONY MD Player MZR35 ..... £179
TECHNICS SL1210 ..... £335

MINI DISCS

MD 74min	£2.75
MD 60min	£2.25
MD Data Disc	£9.99
MD Cleaner	£7.99
Storage Box	£3.50

DAT Tapes

D15	from £2.65
D30	from £2.95
D46	from £3.30
D60	from £3.50
D90	from £3.99
D120	from £4.50

DCC Tapes

JVC D90	£2.99
DCC Cleaner	£12.99

CD-R (Consumer)

CD-R 74min	£2.99
CD-RW	£14.99

Special Offer! Buy 100 of these CDRs and get free CD Label Kit or buy 50 and pay only £15

CD-R (Computer)

Branded	£1.25
Unbranded	£0.89

Misc

Floppy Discs 1.44Mb Box of 10	£2.99
Zip Discs	£8.49
'Press It' CD Label Kit with software	£23.50
Apogee ADAT	£9.99

Remember all prices include VAT - don't be fooled by adverts with small print! If you have a volume quantity requirement, give us a call, and we will try our best to get you the best price.

Place your order by calling NOW!!
VISA **0181 813 8082** MasterCard

THE Mix
30 MONMOUTH ST, BATH BA1 2BW
TEL: 01225 442244
FAX: 01225 732396

NEW ADVERTISING CONTACTS

Simon Tapscott	(Display Sales) .....ext 2729
Alex Morton	(Classified Sales) ...ext 2210
Jeremy Ford	(Production) .....ext 2377
Emma Cary	(Ad Design) .....ext 2173

CAREER WITH A SOUND FUTURE!

THE SAE ADVANTAGE

SOUND CERTIFICATE
3 months Certificate - stage one - introductory level

AUDIO ENGINEER DIPLOMA
9 months Diploma - stage two - intermediate level

RECORDING ARTS DEGREE
12 months Degree - stage three - advanced level
(Degree in partnership with Middlesex University - BA (Hons) in Recording Arts)

NEW STUDIOS and Neve VR and DIGITAL
INDIVIDUAL STUDIO TIME GUARANTEE
STUDY AT ANY ONE OF OUR COLLEGES
27 COLLEGES WORLDWIDE, SINCE 1976

CREATING THE NEXT GENERATION AUDIO PROFESSIONALS

Please call for our free colour brochure and studio tour!

SAE TECHNOLOGY COLLEGE

London 0171 - 609 2653
United House, North Road, London, N7 9DP

Glasgow 0141- 221 3441

SAE TECHNOLOGY COLLEGE

PARIS NEW YORK SYDNEY SINGAPORE MUNICH MILANO ATHENS VIENNA AMSTERDAM BERLIN MILANO AUCKLAND

MEDIA

MEDIA PRODUCTION FACILITIES
Bon Marche Building, Ferndale Road, London SW9 8EJ Tel: 0171 737 7152
www.media-production.demon.co.uk Email: mpf@media-production.demon.co.uk

RECORDING AND PRODUCTION TRAINING
Constantly updated full-time courses operated in association with the pro-audio industry providing unique access to the latest analogue & digital systems in our 24-track automated studio and digital programming suite:

One year full-time Diploma Course
ADVANCED SOUND RECORDING & PRODUCTION TECHNIQUES
Practically based tuition in small groups with theory from internationally recognised specialists supplemented with new technology from leading manufacturers.

One week full-time course
INTRODUCTION TO SOUND RECORDING & MIXING
An entirely practical foundation course (11th/18th January '99)

Three months full-time Certificate courses
ANALOGUE SOUND RECORDING & PRODUCTION
DIGITAL SOUND RECORDING & PRODUCTION

Short courses
AUDIO FOR TV/FILM
Sadie for Radio: Sampling, Sequencing, Editing: Music Promo.

These comprehensive courses give the necessary skills & experience to gain employment in the audio-visual industries.

COURSES COMMENCE ON 25th January 1999

Extensive range of TV/video & Computer Graphics/Animation courses also available

School for Music, Media & Design
Sound Production & Recording Techniques

These 5-10 day courses have been especially designed to give students extensive 'hands on' experience, maximum subjects and the flexibility to study 1 or 2 in depth or more in lesser detail. The course consists of up to 40 hours studio time per 5 days and group sizes are strictly limited to 3 per course. Courses run 2 x month throughout the year.

Days	BB	excBB	1 / 1	Tuition
5	£250	£210	Extra	£50
10	£500	£420	Extra	£100

Tel. 0140[illegible]/342773

The Recording Workshop

Since 1989 SPECIALISES in 2 month HANDS-ON part-time COURSES in very small groups on latest recording & production techniques for beginners and advanced. Subjects include: MICROPHONES, EQ, EFFECTS, PROCESSORS, MULTI-TRACKING, MIXING, MIDI, SYNTHESIS, CUBASE, SAMPLING, PRODUCTION, ETC....

Concessionary rates available

STUDIO AVAILABLE FOR HIRE

Based in West London

For Prospectus call free:
0800 980 7454

DIPLOMA

COURSES

in SSL G-PLUS SOUND RECORDING and MUSIC TECHNOLOGY

IMW

CALL IMW FOR MORE DETAILS AND A FREE COLOUR BROCHURE ON

0171 608 0231

new deal RSA EXAMINATIONS BOARD

ALCHEMEA
College of Audio Engineering

We offer more practical time than any other college.

0171-359-4035
www.alchemea.demon.co.uk

POINT BLANK
STUDIO COURSES
RUN BY INDUSTRY PROFESSIONALS

MUSIC TECHNOLOGY
DJ TECHNIQUES
SCRATCHING

FOR A PROSPECTUS CALL
0181 293 4909
www.pointblank.demon.co.uk

LAE

Live Audio Courses

LAE provides the only course that specialises in Live Audio Engineering. The training you receive is entirely focused on the skills you need to do the job. You will learn all aspects of mixing both Front of House & Monitor systems. Students spend their time mixing bands for real, gaining the experience needed in this demanding field.

For a Prospectus call: 0171 700 3271
0171 736 0090
or fax: 0171 700 4600

THE MIX

TO ADVERTISE CALL ALEX MORTON ON:
01225 442244 EXT: 2210
OR FAX ON: 01225 732396

THE MIX

INSURANCE

HENCILLA CANWORTH
INSURANCE GROUP
Quality Cover For Your Equipment
At Competitive Rates
Telephone Rob or Kevin
0181 686 5050
for an immediate quotation
SOUND INSURANCE

Pavilion
insurance for music and entertainment
THE BEST INSURANCE FOR MUSICIANS AND STUDIOS AT THE BEST PRICE
For instant quotes and cover see web site
www.musicalinsurance.com
OR CALL DIRECT ON
01203 555900

MUSICOVER
The complete insurance for all musical instruments, electronic gear, stage props, lighting, amplification etc.
Designed by a musician for musicians.
Covered at home, out and about, at gigs, in vehicles.
Policy underwritten by General Accident and only available from
Golden Valley Insurance
The Olde Shoppe, Ewyas Harold, Hfds., HR2 0ES
Call 01981-240536 for free info pack, or Fax 01981-240451

COMPUTERS

Sound Cards
Axis Media
PC & MIDI Specialists
Turtle Beach
Yamaha
TERRATEC
Call for Best Prices
Phone now for best prices
01785 240649

COMPUTER SOFTWARE

Computer Exchange
BUY-SELL EXCHANGE
cex
Hey! We want your...
Soundcards, Music Software
MIDI Interfaces Sample CDs
Controller Keyboards etc...
0171 - 916 3110
219 TOTTENHAM COURT ROAD
LONDON W1

FLIGHT CASES

"FAST FLIGHTS"
BY REFLECTIONS
Highest Quality
Flight Cases
made to order
or from stock
Phone
01993 775677
or Fax your spec through
on 01993 706243

Custom & Standard Gig Bags
All our products made in the west country in our own workshops *(no imports).*
Bishnym Products
Victoria House
Bishopsnympton
South Molton
N. Devon EX36 4PG
☎ 01769 550631
Fax 01769 550935

COMPUTER RECORDING

Creative Music Systems
01938 PC Audio Specialists 570337
We will give your music the - edge
the - edge
On Screen: Automated Mixing, Multi Effects Racks, Synthesizers, MIDI Sequencing & More.
All systems specially configured & tested To Suit You

VOCAL TRAINING

'VOICE BUILDING'
CD: £10.95, CASSETTE: £7.95
Used by thousands of singers to maintain vocal fitness, this 1 hour recording is the UK's leading vocal exercise programme.
Also on video: 'The SAM WEST VOCAL WORKOUT' £22.95
Covering: Breathing, Range, Resonance, etc.
No charges for postage, in UK.
Goods sent within 1-3 days.
VISA/MASTERCARD welcome.
Cheques etc to: *'Sam West Productions'*
143 Bathurst Gardens, London NW10 5JJ
Tel: 0181 964 0097
www.samwest.co.uk
Call credit card hotline for any promotions

FOR HIRE

ADVANCED SOUNDS LTD
(Hire & Sales)
- Musical & Studio Equipment Hire
- Home Recording Packages Hire
- New & used equipment Sales, part/Ex
- Delivery/Collection - Nationwide

LOW RATES
GOOD SERVICE
0181 462 6261 (OR 8621)

ATLANTIC HIRE
RECORDING/PA EQUIPMENT
FOR HIRE
Discounts
Best Rates
TEL: 0181-209-1384
or 0181-209-0025
(24hrs)

ADVERTISERS INDEX

Audioworks 103
Behringer 81
Deltron 103
Drawmer 97
Fletcher 17
Focusrite 36
HHB Communications 45
HW International ..49
Kenton 65
Midiman .....IBC
Millennium 76
Music Connections .21-22
Music Track 74
Newtronic 9
Peavey 95
Protape 15
Sanctuary 111
SCV 26
Smart Sound Direct .60
Soho Soundhouse ...55
Sony 63
Sound Solutions ...103
Sound Technology ..38
Soundcraft ....13, OBC
Soundscape 41
Stirling 59
Studiospares 24
Teac .....IFC
UK Office 19
Way Out West ..150-151
Yamaha 68-69

DAVID HOLMES

Film composer, producer, DJ – you name it, David Holmes has been there. *Nick Serre* gets the full story...

"You talkin' to me?": David Holmes in a New York state of mind...

Eclecticism is the name of the game for David Holmes. A DJ since the age of 15, David has an obscure record collection to die for. Last year saw him traipsing the streets of downtown New York equipped with just a portable DAT machine for company. The resulting interviews he captured set the background to the musical journey that is *Let's Get Killed*, a dance album that made the masses sit up and take notice. But the story goes back further. In his early career he was one half of Disco Evangelists with cohort Ashley Beedle, and is also a respected remixer, film composer and in-demand DJ. His latest release, *Essential Mix*, is a mix album of some of his favourite tracks from artists including Brigitte Bardot and James Brown, with the emphasis on the unusual. Produced and generally fucked around with by David, it's an intricate web of psychedelic passion and soul, with some dirty, dark grooves. We managed to catch up with David in his hometown of Belfast...

How did you make the move from DJing into production?

I suppose it was a logical progression for me. When you've been DJing for a while you want to make records. So I put myself in a studio in Northern Ireland for a few months, and just hung out and watched what was going on. I figured out how everything was done, and then went to London to do a collaboration with Ashley Beedle, called Disco Evangelists, and the idea wasn't that difficult to make into reality when you've seen how it's done. The processes are really very straightforward, as long as you have strong ideas about what you want to do. Nowadays I find it more difficult because things are more complex. It's not just a case of sticking down a 4/4 drum beat and hi-hat pattern. It's a lot more complex now, and that's what I've taken on-board.

Is it important to have different angles?

Making music is about having a laugh anyway, and I love it. There are just different ways of looking at it. I had achieved a lot in where I was coming from in production, but not where I was coming from normally. I'd been into the influences on *Let's Get Killed* longer than I had been into electronic music, you know, when I was 15, it was '60s soul, R&B and jazz and funk. Then other genres come along that just do it for you, and you become obsessed with those and forget your early influences. As you grow older, you realise that you're into music with substance.

There are some obscure cuts on *Essential Mix*, aren't there?

There are lots of people who will know the tunes on *Essential Mix*, but most people won't. On one hand you just want people to hear them, and on the other hand it's trying to do something different. I mean, what's the point in me doing an essential mix album of two hours of techno? I just wanted to arrange it differently, and stick it on a CD so if you're driving, or at home or whatever, you're absorbing all these different flavours. It gives me the opportunity to express to people other types of music that I'm into. There are tracks on there that you couldn't play in a club. And it also gives the chance to be creative, and in a way remix tracks, using the dialogue and samples, and little mad delays and stuff, and it just makes it more interesting than two hours of seamless mixing.

What gear did you use for *Essential Mix*?

We finished it off on ProTools, mainly for levelling and getting the fades right, because it was so much easier to do. But most of it was done manually, and really hands-on, spinning in records and effects. When we'd finished fucking around with it, it was a case of matching it up on ProTools to see how it would all fit together. It was great fun doing it, and I've been getting really good reactions from it. The only gear I really rely on is my samplers. I've got an Akai S3000, and an Akai CD3000. I really find that if you've got an extensive enough record collection – and mine is really obscure and interesting – then when it comes to sampling, and it's stuff that people haven't heard before, it just makes it more interesting. That, and sampling stuff like old French films or whatever.

What turns you on production-wise?

Originality and soulfulness is what makes a great production. It doesn't matter if it's fucking twisted and noisy, you can tell whether it has soul. Funk records have funk in them. Emotion. You know what I mean? I like all kinds of stuff, from Delacota, to Aphex Twin to all kinds of older stuff. It's just a case of people who mean it and are trying to do something different rather than following trends.

How do you approach film scoring?

The film work is a completely different approach because you're making music to footage, and the footage dictates the vibe, whether it's dark, twisted, fucked up or whatever. You've got to go with that, and take the director's ideas, and your own to get the best possible result. The hardest part is if you're scoring it to picture and synchronising stuff like a gunshot or a kiss, but it's really good fun if you're given a free hand.

What's next for you?

I'm starting the new album, and although I've got loads of ideas, I don't want to say too much about it at the moment because ideas can change a lot. It will be heavily scripted, though, and I'm hoping there will be a movie to follow. Visuals really inspire me, and it's about painting a picture, which a lot of people do, but they don't always realise it! TM

Who's DMan In Your Life?

Multicard Driver Now Available

Mac Drivers Available Soon

DMan 2044
PCI 20 Bit 4 in 4 out card

- 4 independent audio inputs/outputs
- 20 bit delta sigma converters with 128 x oversampling
- High performance DSP can provide reverb, chorus etc
- All converters 99db dynamic range
- All channels full duplex
- Inputs can be monitored at any combinati
- Freq response 20hz - 22khz
- Audio connections via female jack br
- Supports all major MME compliant
- ASIO driver available soon
- Optional break

Co2
Coaxial to optical converter
£45 inc. VAT

Audio Buddy
Dual Mic Pre amp with 48v phantom
£89 inc. VAT

S.A.M. Mixer
24 bit S/PDIF - ADAT digital mixer
£329 inc. VAT

2044
1/4" jack external break out box
£45 inc. VAT

Midiman UK Hubberts Bridge House, Hubberts Bridge, Bosto
Tel: 01205 290680 Fax: 01205 290671 E-Mail: midimanuk@compuse

digital
three two eight

Menus belong in restaurants not on mixers

Spirit's unique **E-Strip** avoids the need for tedious menus, so 328 is as easy to use as an analogue desk

42 Channel Digital Mixer with the Human Touch

MAIN FEATURES: Up to 42 Inputs at Mixdown 8 Bus 16 Mic/Line Inputs with Inserts and HPFs 16 Digital Tape Returns with 2 x ADAT Optical and 2 x Tascam TDIF connectors as standard All inputs have access to 3-Band Parametric EQ, 4 external Auxes, 2 Lexicon Effects Sends and Pan via the E-Strip 5 pairs of Stereo Inputs and 2 Internal FX Returns 24 Bit A/D and D/A Converters with 128 x oversampling throughout Moving 100mm Faders throughout 2 x Lexicon Dual Programmable Effects Units 2 x Assignable Mono/Stereo Dynamics Processors with Compressors, Limiters, Gates & Duckers Snapshot Automation with recalling of all main console parameters for up to 100 'scenes' Dynamic Automation capability Undo/Redo, Copy & Paste functions Solo-in-Place, AFL & PFL Solos Full Metering and Monitoring of all Inputs, Processors, Auxes and Masters Full Machine Control with large Timecode display 2 Consoles cascadable for 84 inputs at and 32-track recording Third ADAT Optical Output for Groups or ... 1 x AES/EBU and 1 x SPDIF gives 28 Digital Outs and ... PTIONS: TDIF 8 Channel Analogue I/O Interface ... Mic Mic Preamps with Insert, Gain, HPF and Direct Out ... pairs AES/EBU I/Os for Hard Disk production systems

IN STOCK NOW AT YOUR LOCAL DEALER

H A Harman International Company

SPIRIT DIGITAL 328

Send me a brochure on Digital 328 ☐ The full Spirit Range ☐
I would use Digital 328 for Recording ☐ Theatre or other installation ☐
Other: .....

Digital Mixing Console

I read the following magazines: .....
Name: .....
Address: .....
.....
Please send me a free copy of the Spirit Guide to Mixing ☐

Spirit by Soundcraft™, Harman International Industries Ltd., Cranborne House, Cranborne Industrial Estate, Cranborne Road, Potters Bar, Hertfordshire EN6 3JN, England.
Tel: +44 (0)1707 665000. Fax: +44 (0)1707 665461

Check out the Spirit Website:
http://www.spirit-by-soundcraft.co.uk

TM